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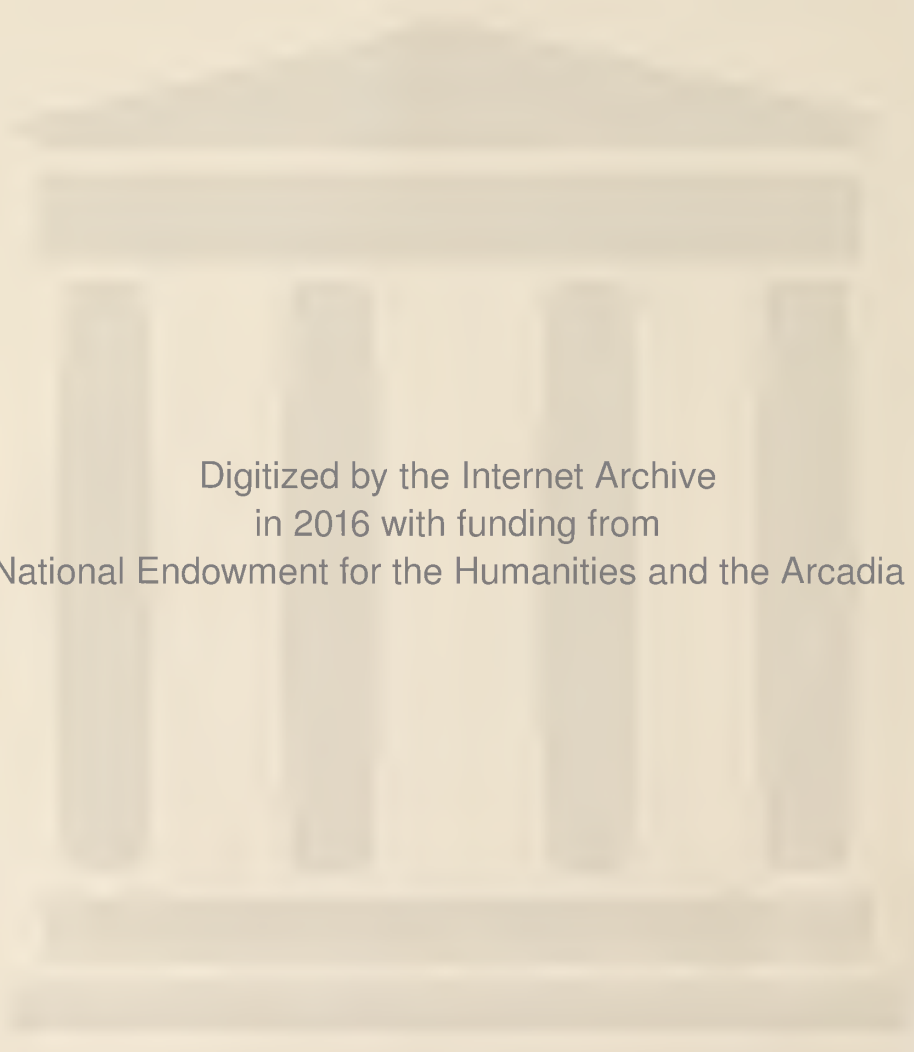
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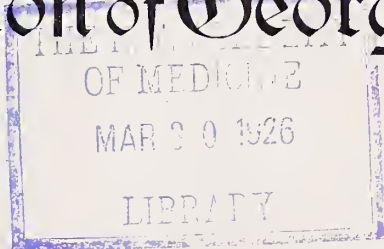


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No. 1

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CHRONIC SUPPURATION OF THE MIDDLE EAR.*

Frank M. Cunningham, M. D., Macon, Ga.

In the discussion of chronic suppuration of the middle ear, we must not allow any influence pertinent to the immediate trouble or entirely extraneous, to lead us into consideration of any but the basic principles. We must ever remember that this disease is local—that is, a collection of purulent matter within the confines of the middle ear. In a large majority of cases, as a result of an infective process, we encounter necrosis of the bone; diseased ossicles—the malevolent nidus, which generates a toxin which certainly has its baneful effect upon the general system. If not a single case of chronic suppuration ever started up one of the many inflammatory complications which seem to lurk about the condition, the presence of a suppurating ear would still be a menace to life, in that it constitutes a fountain of disease, of filth, which to a large extent forces itself into the circulation, arterial, venous and lymphatic, and produces as decided and positive toxemia as was ever generated from any diseased focus. We have only to con-

sider the pathology of the condition to be convinced of the correctness of the position that local treatment, in the shape of cleansing fluids, is purely secondary and per se, has no bearing on the case, inasmuch as those effects never approach the diseased area; never touch the seat of the trouble, and their value (which value is decided, but should be only understood as purely secondary) is only demonstrable to the point that they keep the cavity of the tympanum clean and thus prevent a damming up of the purulent flow. I repeat, though, that irrigating fluids never reach the seat of the disease; never flush the cells where the focus of the trouble lies; never, in fact, exert any therapeutic effect upon the condition. It is not prescribed with that idea in view and has no value other than a cleansing agent for the reservoir of the tympanic cavity. When a discharge, purulent in nature, has continued with or without treatment, for over six months, it is generally accepted that the case comes under the head of chronic diseases. If the cause of the discharge be in an unhealthy ossicle, or in the cells at the posterior zygomatic root, or in the layer of cells in the attic, extending on into the epitympanic plate, it is hardly reasonable to expect a cessation of the disease without a removal of the cause.

*Read at meeting of Medical Association of Georgia, Savannah, Ga., 1913.

Irrigation simply keeps the channel clear, and we appreciate the good offices of the work, but I venture the assertion that not one single case of chronic suppuration, in which necrosed bone has been determined and felt with a probe, has ever been cured by irrigation. I suppose this will incur the opposition of many men who have seen suppuration cease under the continued use of irrigation (I have seen this, too) but it does not in any way argue one single thing, further than the discharge ceased and that irrigation was practiced. Far be it from me to deery or underrate the value of antiseptic irrigation, for its usage is recognized as being of unlimited value, purely as a contributing factor, its practice being limited to the cleansing of the tympanic cavity and external canal of accumulated matter, which accumulation is the result of the disease, and not in any sense the disease itself.

Chronic suppuration of the middle ear is strictly a surgical disease. The location of the middle ear in the anatomic mechanism, with its many avenues of connection with the vital structure, begets for it a place of considerable significance in the discussion of cause and effect, with relation to pyogenic disease within the cranium.

The thin epi-tympanic plate separating from the middle fossa, in which is lodged the tempero-sphenoidal lobe with its function-bearing centers, the tympanic floor, itself constituting the roof of the jugular fossa, holding the jugular bulb, the foot-plate of the stapes in the oval window, and the secondary membrane filling the round window, the promontory indicating the first turn of the cochlea, the rounded eminence of the fallopian canal in which we find the facial nerve running close to and above the oval window; the "stapedius" lodged in the hollow of the pyramid; the opening of the aditus, which leads into the mastoid antrum, whose lining membrane is continuous with that of every cell in the mastoid apophysis; the opening of the Eustachian tube, the posterior wall of which is in direct contact with the internal carotid artery. These are reasons potent why chronic suppuration of the middle ear assumes its place in that class of subjects dignifiedly serious, calling for the consideration of master minds in the determination of the means of cure. There is no sense in dodging the plain fact, reproach though it be, that up to the present time we have failed to regard the presence of a run-

ning ear with sufficient seriousness. The fact that we have seen many people with running ears live to old age and then die of some other trouble, has made us forget or fail to recognize the number of deaths which with our present knowledge we know were directly traceable to this condition, and might have been prevented. The appreciation of the consequences of chronic suppuration should at least be sufficient to engender a more serious regard for the safety of our patients, when they are the victims of a chronic running ear. Without any fear of being contradicted, I unhesitatingly state that chronic suppuration of the middle ear is a much more frequent condition than many of us from our clinical observation are apt to think. Reports show that about one case in every eighty-eight cases of chronic suppuration has some intracranial complication. It is not my desire nor intention to startle every patient having a running ear with the news that he is in constant danger of death, but I do most positively desire to do whatever I can to put the general practitioner on his guard concerning the nature of this disease, so that he may constantly have in mind the necessity of prompt and proper treatment of every antral suppuration, the acute cases, that chronic suppuration may be prevented, and the chronic cases, so that in the presence of cleanliness, septic complications may be avoided. From the writings of a recent author I quote the following:

"The substratum of life is indeed sad when we reflect on the dangers and uncertainties which surround every patient with a chronic running ear. The fact that many cases go through life a victim of such, with these consequences remote and unrealized, should not make us underrate the seriousness of them when they do occur. The insidious course of intracranial infections; the absence of reliable clinical symptoms until severe damage has been done; the pitiful helplessness of the surgeon in the presence of some of these complications, should at least make us careful and force us to an honest effort toward the prevention of this disease, which under ordinary circumstances will, if taken in time and given proper treatment, resolve itself into a condition of comparative safety." Procrastination in any form, and so-called conservative advice, all too frequently, in reality, are a cloak for ignorance of the pathological crisis presenting, plus a lack of

ability to meet the immediate surgical requirements, should have no place in the consideration of measures for the relief of this urgently serious condition. The most frequent causes of this condition may be stated as follows:

(1) Improper treatment of the first stage. This only means in a large majority of the cases that the running ear has been overlooked entirely and has had no treatment at all. The only reason for consulting aural surgeons for the condition even at the late time being rather on account of an offensive odor of the discharge, rather than from any evidence of sickness. (2) Retention of the discharge due to the same cause above mentioned. (3) Unhealthy condition in the nose and pharynx. After the infection has become chronic the most frequent condition is necrosis of the ossicles. As a rule the incus is the first ossicle to become diseased because of its poor blood supply. The stapes most frequently escapes and remains healthy. This with the action of the secondary membrane in the round window probably accounts for the preservation of some hearing in a number of cases, in which the drum membrane has been completely destroyed.

I repeat that the rational cure for chronic suppuration is essentially surgical. Thorough removal of every particle of diseased tissue, regardless of the area it occupies, must be accomplished. Some men recommend intratympanic operation, but these do not meet the requirements of the case.

Within the past few years an attempt has been made by Heath to effect a cure in chronic suppuration by a procedure which he devised and which has been largely advocated in this country by Ballenger. The technique of this operation allows the retention of the ossicles and the drum membrane. The originator claims that by this method the chances for saving the function of hearing are increased. The consensus of opinion, however, among the aural surgeons with whom I have discussed this subject is (and is also my own opinion) that the "sine-qua-non" of any successful procedure in this trouble demands the complete removal of every particle of diseased tissue within the confines of the middle ear. This means infection of any kind, whether it is in bone, membrane, or a retained cholesteatomatous mass. It will be readily seen that with this consideration for a starting point the operation devised by Heath is such an incomplete

affair that it has never been seriously considered by the writer. The one great consideration in the removal of an infective focus from the middle ear is to relieve the individual of the danger from the many complications which frequently accompany this trouble. Any operative procedure, therefore, while pretending to remove the diseased tissue and thereby eliminate the danger of complications, proceeds to do at once an operation which leaves necrosed ossicles and infective membrane, in my mind is not the operation of choice for the relief of this condition. I desire to say further that these remarks and observations apply not only to operations devised by Heath, but to any other of the various operations whether intratympanic, which has for its intention any procedure except a complete removal of every particle of diseased tissue in the cavity.

The anatomical location of Kirschner's cells in the posterior root of the zygoma and superior wall make them absolutely inaccessible to surgical procedures by the intratympanic route. The obliteration of the posterior canal wall, converting the tympanum, aditus ad antrum, and antrum into one cavity is the method, par excellence, by which proper drainage can be procured. The chief objection to this operation lies in the danger of wounding the facial nerve. The removal of the quadrilateral piece of bone at the base of the posterior canal wall, and by which a view of the horizontal semi-circular canal and prominence of the fallopian canal can be obtained, must be accomplished with extreme care. Contrary to the accepted view, it is my belief that the facial nerve is not as frequently injured in this area as in the area of the upper half of the eminentia pyramidalis, where, under ordinary circumstances, the canal wall is very thin and often presents deficiencies, so that it is not at all uncommon for the facial nerve sheath to lie in contact with mucous membrane of the middle ear. As a matter of fact, dehiscence of the fallopian canal in the tympanum is a frequent anatomical condition. Then, too, Zuckerkandl has called attention to the normal existence of a small foramen in the canal wall just above the oval window for the passage of a branch of the stylomastoid artery to the stapes. With an exudate in the tympanic cavity there is every chance of injury to the nerve when an attempt is made to remove that exudation. With care, however, and a certain amount of skill, the dan-

ger of facial paralysis need not be feared. The cure depends on the entire removal of all diseased tissue. Care must be taken that the external wall of the attic be removed, for without this, proper drainage cannot be established. The failure to remove this structure has been the cause of failure in many cases, which would otherwise have been perfect results.

The question of the effect of the radical operation on the function of hearing is as yet unsettled. To my mind there is no doubt that in a large majority of cases the function is more or less decreased. In the technic of the operation it should be remembered that careless curettage in the area of the stapedial insertion in the oval window, or of the secondary membrane in the round window, must cause a limitation in the conductive power of these structures, invariably followed by diminished hearing-power. It is true that there are a few isolated cases in which the function of hearing has been benefited by the operation, and a larger number in which the hearing remained unchanged. Still, my results and my observation of the results of a great number of other operators, forces on me the conclusion that the function of hearing, in a large majority of cases, will be injured to a certain degree by the radical operation. This, however, should have no bearing whatever in the matter of determination of the proper course for the relief of so serious a malady as chronic suppuration of the middle ear.

It is not my intention to discuss the various steps in the technique of this operation. The mechanical procedure is one only of interest to men who devote their entire study to diseases of this locality, and a mere recital of the operation which I do for the relief of the trouble is of no especial interest to the general practitioner.

There is a feature, however, in the performance of this operation, which it occurs to me is of sufficient importance to demand special reference. It is the treatment of the tympanic orifice of the eustachian tube. Up to the present time the accepted treatment seems to have been a gentle curettage of the membrane at this particular point. The results obtained by this procedure are not as satisfactory as one would wish. This fact is witnessed by the many weeping tubes which we find in ears which have been subjected to the radical operation, and which in every other detail have been a perfect success.

So much for chronic suppuration in itself. Now for consideration of the various complications which may arise at any time during the course of this trouble. I attach herewith the histories of the several types of cases which I shall discuss, and upon which I have based my observation. I have the temperature charts of these cases, but their publication would take up too much space.

(1) Mastoiditis may result at any time in the course of chronic suppuration. While this condition may remain latent, and apparently without danger, it is always a ready victim to any acute inflammation, starting up an exacerbation of the old process. These cases are most dangerous, and attend very frequently with intercranial complications. Given a condition of chronic suppuration of the middle ear, with a sudden suppression of discharge with increasing pain, I should insist upon an immediate operative intervention even in the absence of any other symptoms. It is one of the most imperative conditions I can conceive of, and should be dealt with in a prompt and decisive manner.

(2) Extension of caries into the semi-circular canals is fortunately a rare occurrence. The symptoms of disturbance of the labyrinthine fluid, viz: vertigo, dizziness, nausea, vomiting, staggering, and occasionally nystagmus would seem to show the location of the trouble. The disturbance of function, however, will generally, under judicious treatment, clear up. In the study of this condition I take occasion to remark that the symptom, vertigo, is to my mind frequently misconstrued. Dizziness not infrequently occurs as a result of what the laity call "biliousness;" very frequently from some digestive disturbance; from trouble in the cerebellum; and it is seen in various conditions affecting the brain, especially in those of a pyogenic nature. Occasionally we encounter vertigo as a result of the change in the equalization of pressure upon the labyrinthine fluid, as a result of a middle ear lesion, or as a consequence of obstruction in the eustachian tube. We have seen dizziness result from the syringing of an ear for the removal of wax.

If in the course of chronic suppuration, vertigo and dizziness become prominent symptoms, we are led to believe that the disease has probably invaded the inner wall attacking the bony covering of the external semi-circular canal; or, extending on to the secondary membrane in the round window and there impinging on the labyrinthine

fluid. We are facing practical questions, symptoms whose recognition and appreciation must have a far reaching effect upon the minds of men who have not heretofore regarded chronic suppuration with a serious consideration which its nature, as a life destroying agent, commands. It is hardly necessary to say that a continuation of the inflammatory process, in the line of invasion already started, must eventually, unless deterred by surgical intervention, inevitably lead to the condition of Basilar meningitis. Basilar meningitis has invariably a fatal prognosis. This naturally leads our minds into the field of labyrinthine surgery. Operations on this structure, of course, have for their purpose the establishment of drainage from the internal ear. The operations devised by Jansen of Berlin or Neumann of Vienna, along with that of Hinsberg, have been exploited thoroughly by the originators of each separate method. The credit for the most practical entrance into this field belongs, in my opinion, to my erstwhile roommate and my friend, John D. Richards of New York City. Richards enters the vestibule from behind and does not remove the section of bone (Trautmann's Triangle) lying between the sigmoid sinus and the labyrinth. Further than this, however interesting the subject and tempting the desire, I will not discuss. But it is proper to say that no man should ever consider the invasion of this field of surgery until he is thoroughly qualified to perform a complete radical mastoid operation.

(3) The proximity of the internal carotid artery, lying in contact with the posterior wall of the eustachian tube at its tympanic orifice renders it entirely possible for the ulceration to extend through this vessel, invariably fatal hemorrhage.

(4) We have seen one case in which the pus had burrowed through the tip (Bezold perforation), and sweeping under the fascia and muscles of the neck, invaded the region of the spinous processes of the lower cervical vertebrae. This is a rare occurrence, however, the usual route in such cases being down the neck along the course of the sternomastoid. In one case there was a distinct Ludwig's angina as a result of the purulent fluid going between the superficial and deep fasciae, extending into the thoracic region.

(5) Epidural abscess, a circumscribed collection of pus upon, that is, outside the dura mater. It is the result of extension of

the infective process from the original focus in the middle ear. The route of extension may be one of several. There may be a sinus leading directly into the cranial cavity; the infection may be transmitted through the various channels which traverse the adjacent structures; or there may be simple extension of the inflammatory process by direct contact of the dural membrane with the diseased epi-tympanic plate. There are no distinctive symptoms of epidural abscess, and the condition is generally recognized only at the time of the operation. It is possible, though, to have such violent infection that a leptomeningitis or sinus thrombosis may be early complications.

(6) Subdural abscess is not a frequent complication. It may result from ulceration and extension of the process from an extra dural abscess, or from puncture of the dura.

(7) Serous Meningitis. There is a type of case occurring as a complication of middle ear troubles at times; at other times seen when no definite association with any ear condition can be determined as a causative agent. I refer to serous meningitis. It has been my good fortune to have observed quite a number of cases of this class, and again the conclusion is forced upon me that surgery promptly and intelligently applied offers the only hope of relief. There are cases coming under the observation of every man who does much work in the surgery of these parts. It is not an easy matter to make a diagnosis of serous meningitis occurring either with tympanic and mastoid inflammation, or as a separate unassociated lesion. In fact, the majority of cases which it has been my lot to observe were only recognized as such in my research for what I thought some other trouble. I recall to mind three distinct occasions, in one of which I sought a sinus thrombosis; in another a cerebral abscess, and in another stumbled over the condition when the dura was exposed in the performance of the removal of some softened bone in the epi-antral area extending on into Kirschner's cells in the posterior root of zygomatic process. It is a matter of the most extreme importance that this condition be not confused with a thrombosis of one of the cerebral sinuses. If, for instance, in a case upon which we have performed the operation for the relief of mastoiditis we have several days of normal pulse, respiration and temperature, followed by a chill and

a sudden and rapid rise of temperature to 103 or above, we are forced to settle promptly in our own mind the cause of this sudden outburst. The first thought is, naturally, sinus involvement. If the temperature fluctuates for several days following we are told that we should inspect and explore the supposedly diseased vessel. Now, if we encounter a clot formation, so good, for we have given the case the benefit of early treatment which will prevent septic absorption, which would surely follow. If, on the other hand, that case happened to be one of serous meningitis, and the symptoms at times are not unlike, the formation of the thrombus, even though it be of sterile gauze, would simply cause a back pressure on all the cerebral vessels and aggravate the very condition for the relief of which this special form of surgery had been practiced.

Case No. 1.

Mr. J. W. B., age 70.

History. Twenty days before admission patient had sore throat. A few days later had pain in ear with marked deafness, throbbing and diffused headache. Otorrhoea a few days later—thin, serous fluid. Pain in ear continued with severe headache, worse at night. Patient has had no chill and no fever. When admitted to hospital he had some tenderness on pressure over the mastoid, and some sagging on the posterior superior canal wall. Temperature normal. We made a free incision in the drum membrane, bringing the cut well out into the canal, and ordered irrigation every two hours with bichloride solution (1-5000). Next day he had pain in the neck with headache. There was a slight discharge from the ear. Following day temperature 100. The drum membrane had a darkened lead-gray appearance, and it has been my frequent observation that this character of membrane is an indication of trouble.

On the next day, that is the fourth day after admission to the hospital, the temperature having remained elevated, with the dizziness and headache increasing, it was decided to operate on the mastoid. Under gas and ether anesthetic the usual post auricular incision was made. Cortex apparently healthy. On opening this with a gouge a flow of greenish yellow pus escaped. No odor. Antrum opened and enlarged and the cavity cleaned of necrotic tissue. The entire mastoid structure had undergone necrosis.

The tip and zygomatic cells were removed. The lateral sinus was uncovered and its anterior wall presented a layer of dark granulations. No evidence of thrombus. The dura, sinns and antrum were packed off separately after the method of Dench. After the operation the patient was fairly comfortable. For three days he seemed to improve. On the fourth day he had a severe pain in the ear and over the whole left side of the face. Perspired freely; had some stiffness in the neck. In the afternoon he was slightly delirious. Fifth day, patient drowsy; had incontinence of urine, and temperature 103.6. Seventh day he had sensory aphasia. He had incontinence of urine and faeces. The fundi showed no change. He became unconscious. Pulse 76, temperature 105.6. Eighth day the aphasia in a measure disappeared.

Second Operation. Incision of previous operation carried through the body of the temporal muscle, to within one inch of and above the external canthus. The temporo sphenoidal lobe was uncovered and exposed. The dura mater was flabby. In the center there was a blackened spot. On incision a mass of broken down brain tissue exuded. The lobe was explored in all directions, but no pus found. The congested appearance of the vessels of the cerebral membranes along with the free flow of serum, settled the diagnosis of serous meningitis. Patient's pulse after operation ranged between 100 and 120, with temperature 103. He remained unconscious until death on the following day.

This is serous meningitis occurring as a result of extension of infection from the tympanic cavity.

Case No. 2.

History. Fifteen months ago patient hit head against a wall. After this he had at different times much headache. Two months later he had severe otalgia, following a cold in the head. Slight tinnitus and some deafness. Pain worse at night. No discharge. A post auricular swelling appeared. This was incised two weeks after onset. This has discharged a thin yellow pus ever since. The boy has had much tinnitus.

Present Illness. Three days before admission patient had severe pain in ear and could not sleep. Much ringing and buzzing. Headache severe. Yesterday ear began to discharge bloody pus. On admission temperature 101.6. No nausea, but some chilly sensations. Operation. Gas and ether. On inci-

sion a hard white cortex was exposed. Antrum deeply placed and located with a good deal of trouble. It was opened and found filled with a cholesteatomatous mass. Antrum and aditus thoroughly curetted. Upper two-thirds of bony canal wall removed and a small piece of bone from the tympanic ring bitten off. Tip cells removed. After operation patient seemed quite dull and dazed, and complained of more severe headache. Two days after operation the boy was unconscious for about an hour. Eyes negative. Pulse 64. Temperature 99. This suddenly jumped to 102.6. The following day a second operation was performed as exploratory for suspected cerebral abscess. Original incision extended into the temporal region. Muscle and periosteum retracted, exposing cranium of the middle fossa in the temporal area. Bone was removed with rongeur forceps. Dura was healthy and not unduly tense, apparently normal. The temporosphenoidal lobe was aspirated in several places without locating any pus. There was a free discharge of serous fluid. The cavity was dressed as usual. Recovery gradual and uneventful. Patient was restless the first night after operation, but comfortable the next day and after. Discharged in two weeks cured.

This was unquestionably a case of serous meningitis occurring as a direct result of extension of infection from the middle ear and which was located in our efforts to determine the position of a cerebral abscess. As a matter of fact the true nature of this case was not suspected until after our failure to locate the brain abscess, coupled with the unusual discharge of cerebrospinal fluid.

Case No. 3.

Mr. A. L. O., age 26. Occupation, weaver in a cotton mill.

History. About four months before received a blow on right side of head. No break in the skin and no unconsciousness at the time. In about a month following the beginning of the present trouble was first noticed as a gradual failing of vision in both eyes, which continued for two weeks, becoming gradually worse until patient was totally blind. Paralysis of legs appeared; was gradual and ascending, going as high as the waist line. About two months before admission to the hospital eye and leg symptoms began to improve simultaneously. The condition continued to improve gradually until two days before admission to hospital, when convul-

sions set in. He is reported to have had thirty-three convulsions in two days. Admitted to Macon Hospital November 27th, 1906, in wild maniacal condition. Had to be placed in a restrainer. Had several convulsions after admission to hospital. The history of incontinence urine and faeces since August 1st.

On July 25th he consulted my esteemed associate, the late Dr. C. H. Peete, who diagnosed a condition of rupture of one of the intracranial blood vessels. He was put on treatment of increasing doses of the saturated solution of iodide of potash. There is every reason that he neglected to take his medication with any regularity. Patient has always had a good mind up to the beginning of the present trouble. He has never lost use of the upper extremity. On examination profuse perspiration was found over the upper extremities while there was none on the lower. On December 9th I was called into the case. Examination of his fundus found a choked disc in the left eye. In the right eye the disc was not choked, though the retinal vessels were tortuous and very congested. Serous meningitis suspected and operation advised. Advice not accepted at this time.

Hemoglobin, 75 per cent; red blood cells, 4,256,000; white blood cells, 35,000; polymorphonuclear-neutrophils, 88½ per cent; large lymphocytes, 2 1-3 per cent; small lymphocytes, 3 1-12 per cent; eosinophiles, 6 1-12 per cent; basophiles, none. A large number of megalocytes and microcytes and shadow corpuscles were found. Negative to Plasmodium Malariae. Operation December 31, 1906.

The skull was trephined in the left parietal region and a large area of bone removed with rongeur forceps. The dural covering in the exposed area was under extreme tension. The meningeal vessels showed intense congestion. When the dura was incised there was an explosive gush of serous fluid. As soon as this pressure was relieved cerebral pulsation which heretofore could not be felt, immediately became evident. After operation temperature gradually declined until on the seventh day it was normal. All the other symptoms gradually improved. The patient was able to retain urine and faeces. On the tenth day after the operation there was a sudden rise of temperature which probably resulted from absorption, and which disappeared when the wound was cleaned and

dressed. However, temperature varied from 97.3 in the morning to about 102 in the afternoon, from now until the day before dismissal. Patient was, with some assistance, able to walk. His mind was perfectly clear. He was discharged practically cured, and up to the present time has had no further trouble. This is a case of serous meningitis in which no definite association with any ear trouble could be demonstrated. There are cases which must be of extreme interest to every student of pyogenic disease of the brain and its coverings. An interesting observation is the amount of cerebrospinal fluid which may discharge through the dural opening in cases of this type. According to McEwen, if during an intra-cranial operation the subarachnoid space be opened, excessive expiratory efforts, straining, sneezing, coughing, loud expiratory exclamations cause a welling up of the fluid from the water bed through the aperture in the cranium, even though it be situated at the vertex. I have no doubt that a great many cases in which the operator had thought he had entered the lateral ventricle because of the outpouring of the cerebro-spinal fluid, was in reality nothing more than this discharge from the overfilled water bed. It has been asserted that bleeding from the nasal septum generally relieves any congestion of the cerebral veins. May not this then be a symptom expectant of meningeal congestion of this particular type.

(8) Lepto meningitis is the only inter-cranial complication, seen as frequently with acute as with chronic suppuration. The *diplococcus meningitidis intracellularis* is a factor which certainly has to be reckoned with in acute meningeal inflammation. Its presence indicates a most violent type of inflammation. We have seen one case in which the increase in the severity of the disease was so rapid that from eleven o'clock in the afternoon, when the first symptom was noticed, the condition became so rapidly and seriously dangerous that when the operation was performed in the evening, a condition of beginning meningitis was found already present.

Case No. 4.

Mrs. S. W., age 27.

History. A few days ago right ear began to have pain. Tinnitus present. No deafness, fever, headache, or discharge. On examination the tympanic membrane was found to be bulging. Antrum and tip tenderness

marked. Tenderness on pressure over the site of exit of the emissary vein. Posterior-superior canal wall sagging. Operation. Gas and ether. The usual curved post auricular incision was made. The cortex had every appearance of normal cortical structure. The sub cortical cells were apparently healthy. The lateral sinus was placed far forward and was exposed for about one quarter of an inch opposite the antrum. The antrum was entered with some difficulty, there being such a small space between the sinus and the posterior wall. The antral cavity was filled with pus and was thoroughly cleaned. The cells at the root of the zygoma were removed and the tip cells were obliterated. The wound was irrigated with normal saline solution and the usual dressing applied. No exposure of the dura above. Condition after operation good. For five days following operation general condition good. Temperature not above 100. On the evening of the fifth day the temperature jumped suddenly to 103.4 and for six days following varied between 100 and 104. This led to a suspicion of a thrombosed sinus and accordingly patient was prepared for a secondary operation. The following day the wound was enlarged. The sinus uncovered from the knee to bulb. The area which had been exposed at the primary operation was covered with granulation and there was a deposit of plastic lymph from this point above and below. The sinus was freely bared and incised along the anterior wall. Free hemorrhage occurred from both extremities, and the vessel was packed to control the bleeding. Patient was in a state of collapse after operation. Normal saline solution infused into median cephalic vein. Temporary reaction. In half an hour patient had chill; became wildly maniacal. Pupils widely dilated. Death occurred ten hours after operation, the patient continuing a wild delirium up to the time of death.

Case No. 5.

Miss A. R., age 20.

History. One week before admission patient had a fly in the right ear. This was removed by family physician with instruments. Four days later there was a slight otalgia. Next day it was more severe, with some discharge, thin and purulent. No deafness. No tinnitus. No fever, but some headache. Pain over mastoid area for past three days.

Operation. Gas and ether. The usual mastoid operation was done, evacuating pus from

the antrum and cells. Sinus exposed. Apparently healthy. No exposure of dura. Usual dressing. Post operative condition good and patient seemed to improve. At times she had pain in the head, abdomen, and chest. A most careful physical examination gave negative results. On the eleventh day after the operation patient had a chill which lasted ten minutes, followed by an immediate rise of temperature from 98 to 104. On the morning of this day the patient had been sitting up in a chair and said she felt unusually well. One-half hour after the first chill she had a second chill lasting five minutes. She had no nausea. There was some pain in the region of the wound. This was examined and found clean, and was re-dressed. Three days later patient had convulsive twitching of the entire right side with some stiffness in the neck. Patient had constant headache from this time and did not sleep at all. Eye ground negative; twitching ceased. Temperature continued very irregular, varying from 99 to 103.8. Blood examination negative for malarial organism. Eighteenth day after first operation, and one week after the sudden rise of temperature, a second operation was performed. The field was cleaned, and the sinus uncovered from knee to the base of the descending portion. The wall was freely incised and a copious flow of blood from both ends showed that no thrombus was present in that vessel. Accordingly the opening was plugged with iodoform gauze and the wound dressed in the usual manner. After operation the temperature remained high and irregular. Patient had constant headache. Was rather sleepy. Slow cerebration. Took nourishment well. One week later temperature reached 104.6. Did not go below 102 during the remainder of life. Next day patient varied between a condition of drowsiness at one time and wild delirium at another. Urine passed involuntarily. Constipation. Two days later the lateral sinus at dressing was found to be distended with blood. It was reopened with a free flow. Temperature remained elevated. Urine and faeces passed involuntarily. Chest and abdomen negative. Widal reaction negative. Two days later patient had twitching over the entire body. Remained unconscious. Three days later, that is, one month from the beginning of symptoms, the patient died. No autopsy permitted.

Case No. 6.

Mr. T. W. P., age 35.

History. April 1, patient had sore throat

with violent pain in right ear, for which he consulted his family physician. After two weeks he went to work for two days. April 16th he had a sever chill, and says that he had some fever following.

April 18th he had a second chill, followed by fever. The pain in ear was sharp and shooting in character, and was worse at night.

April 19th. The condition not showing any improvement, I was called into the case. Examination showed a decided bulging of the drum membrane in the lower anterior segment. A free incision was made evacuating a quantity of clear serum. On palpation the mastoid was found to be extremely tender, more pronounced over the antrum, radiating to the tip and post-mastoid region. The fundi showed a decidedly hyperaemic condition, more marked on the right. Vomiting at intervals for the past three days. Immediate operation advised. Patient brought to hospital and admitted April 20th. He had a septic appearance and was almost exhausted.

Operation. Chloroform, changed later to ether. The usual mastoid operation was performed. The dura was exposed under the middle lobe. The sinus was uncovered for a small area and was to all appearances in a healthy condition. Post-operative condition fair.

April 20th, 4:30 p. m., pulse 54-48 to the minute. Nausea and vomiting.

April 21st. Nausea and vomiting continued. Patient was very restless and apparently in great pain. The region of the wound was examined and redressed. The pulse and temperature remained low.

April 22nd. Nausea and vomiting continued. Patient complained of throbbing in head and severe frontal headache. Ophthalmoscopic examination showed congestion of the vessels of the disc. Nausea lessening. Retained nourishment. 9:00 a. m., temperature 98.2, pulse 78, respiration 20. 12:00 m., temperature 102.3, pulse 88, respiration 22. 9:00 p. m., temperature 103.2, pulse 100, respiration 24. 9:30 p. m., temperature 104 in axilla. Patient restless all day, very drowsy, complained of severe frontal headache. A second operation was determined upon. An incision was made from the upper angle of the original wound upwards through the temporal muscle for about two inches, then carried directly forward for about two inches. The bony covering of the temporo-sphenoidal lobe was exposed and showed a

dural membrane covered with adhesions and granulations. The surface was unusually congested and red. The tension was not raised. The lateral sinus was uncovered from the knee to the bulb. Throughout its descending portion the vessel wall was dark and had a diseased appearance. A bistoury was plunged into the anterior wall of the vessel and a free incision made. Hemorrhage was copious from both extremities. The opening in the vessel was plugged with iodoform gauze and the usual dressing applied. Patient was delirious after operation, but on the following morning was more rational. He spent a fairly quiet day until late in the evening, when he became wildly delirious and tore the bandage from his head. His respiration became labored and became gradually worse, until midnight it simulated Cheyne-Stokes. He continued restless and sank into unconsciousness and died the following morning without having regained consciousness.

A fact in connection with this case worthy of careful study was the difference of some time more than two degrees in the temperature of the right and left axilla. In my own mind I can find no reasonable explanation for this unusual condition.

(9) Abscess of the brain, as a complication of chronic suppuration occurs most frequently in the middle lobe (temporosphenoidal).

This is natural on account of the anatomical relation. It is rare to find this a complication of acute inflammation, though such cases have been reported. Symptoms vary. The most reliable are, pain and headache in the temporal region often extending into the frontal. Nausea and vomiting, slow full pulse, indicative of pressure, though at times the pulse rate is very high. Low temperature, frequently sub-normal, although cases are seen with marked hyperpyrexia. The difference in the character of symptoms can probably be accounted for only by the difference in the nature of the abscess itself. If, for instance, the abscess formation is of short duration and there has not been sufficient time to have produced a limiting membrane, the pressure is most probably not confined, but is equally distributed over the adjacent parts, and probably equalized in a measure by the elastic water bed. If, on the other hand, the condition is of longer standing and a limiting membrane has been formed, the symptoms, which we have come

to regard as characteristic of intra-cranial pressure, will probably be seen. The determination of the character of any given case can be readily accomplished by the use of an instrument devised and used by Dr. Whiting, and which he calls the "encephaloscope."

In a case which I had the pleasure of observing, in association with Dr. Whiting, we used this instrument and saw the following most interesting picture: The wall of the abscess cavity was uniformly red. No necrotic brain tissue. At the deepest part of the cavity there was a pale pink membranous looking structure, across which ran vertically two very large arteries or veins. If these were in the ependyma, the abscess must have been nearly ready to burst into the ventricles. The fact that there was no limiting membrane to be seen through the encephaloscope at the time of operation indicated the acute nature of the process. It also indicated that the introduction of a finger into such a cavity would determine absolutely nothing regarding the extent of destruction. The finger would have come in contact with a soft brain tissue which would have conveyed no definite impression to tactile sense. Moreover, the finger, when prodded about without any aid of visual direction, is likely to do harm. My honest belief is that it is never justifiable under any condition where pus is present in a brain cavity to introduce the finger. No possible good can result, and a dissemination of the purulent material through the crevices of the adjacent convolutions, with its terrible consequences, is most likely to result. On the same principle the practice of irrigation in a brain cavity is condemned. A symptom not referred to in many text books, but which I have observed in several cases of brain abscess, is that of pain or cramp in the foot on the side opposite to the abscess. Facial paralysis at times. Localized paralysis or complete hemiplegia; slow cerebration, irregular pupils, though it is not constant. Aphasia is a symptom of significance. It indicates that the seat of the trouble lies in the left temporo sphenoidal lobe. In left-handed people the aphasic center is on the right side. Optic neuritis or choked disc is a common, though by no means invariable symptom. Its absence does not in the least preclude the existence of a cerebral abscess. In the charts of cases of brain abscess which I have, the marked difference in the charac-

ter of symptoms of what was apparently a similar condition pathologically will be readily noticed. I refer to cases No. 7 and No. 8.

Case No. 7.

Mrs. C. M., age 20.

History. May 17th, admitted to hospital. For four days previous patient had pain in the head and a discharge from the ear. No odor from the discharge, no dizziness and no tinnitus. Operation. Gas and ether. Usual mastoid operation, converted into a radical by removal of upper two-thirds of posterior canal wall. The sinus was exposed in the descending portion. There was a streak of darkened bone about one-half inch wide, which followed the course of the lateral sinus from the knee as far back as the area just over the torcular. The dura under middle lobe was exposed. Usual dressings. Case improved and was discharged in good condition, on May 27.

May 31. Patient returned to hospital with symptoms of brain abscess. Low temperature, slow pulse, localized pain.

Operation. The bone covering the middle lobe was removed for area of one inch square. The meninges were congested. A knife was introduced into the lobe and a quantity of yellow stinking pus evacuated. The cavity was packed with a single wick of iodoform ganze. Patient gradually improved and was discharged June 7th.

After being discharged the patient returned several times for dressing. She then stayed away and it was only after the greatest difficulty that she was brought back to the hospital. She was finally returned to the hospital, however, in a semi-conscious condition. June 25th, patient re-admitted. Temperature 99, pulse 70. Line of old incision reopened. Pus bursted out two or three feet when the dural membrane was incised. Cavity cleaned and explored. There was a bulging prominence anteriorly resembling pressure from another abscess.

June 26th, patient had retention of urine; marked choked disc. Was very noisy. Temperature 99, pulse 54. Apparently the condition did not improve.

June 27th. The bulging area anteriorly was incised. A cavity was evacuated of a quantity of greenish yellow thin pus. This showed the presence of streptococci. The cavity was packed. Condition seemed to improve immediately until the day of discharge,

which was July 21st. The patient gradually improved and was feeling well, except for a pretty severe frontal headache. Optic neuritis entirely disappeared and patient felt well. A month later the patient returned for examination and was found to be entirely cured.

Case No. 8.

C. G., age 6, October 29th.

History. Had measles two years ago. Discharge from the right ear for six or seven days at that time. About one year ago had pain in the ear with the discharge for about ten days. Present illness. About ten days ago patient had severe pain in ear and head. Much vertigo and dimness of vision. Vomited on day of admission. Fever since onset. No chill of a distinct type, although the boy had chilly sensation. Mastoid tenderness and redness noted three days ago. No discharge.

Operation. Gas and ether. Usual operation. Usual dressing. Twenty-four hours after operation patient had general convulsions, requiring the administration of chloroform to control. One hour later the boy had a second series of convulsions. The wound was examined and dressed. It was entirely healthy in appearance. The boy was more or less drowsy. The pulse at times was intermittent.

November 9th. Pulse 66, intermittent and soft. Patient drowsy. Temperature 98. For the past four days temperature has risen to 101, returning to normal each day. He had no chill. He has vomited twice. He developed paralysis on the left side of the body. The pupil of the right eye was widely dilated. Both pupils react to light and accommodate. No deviation.

Second operation. A temporo-sphenoidal abscess was evacuated. Patient did fairly well. He became conscious and the paralysis cleared up.

November 27th. The temperature reached 105. The boy was restless and drowsy. Pulse intermittent. Patient became unconscious. Temperature remained high. There was no demonstrable signs of meningitis. The condition gradually became worse until the time of death, December 1st.

Case No. 9.

Mrs. M., age about 50.

History. The record of this case has been lost, but I give the details from memory, because of its most interesting nature. The

case presented with a mastoiditis, having at the time a complete facial paralysis. The usual mastoid operation was performed. There was no evidence of disease about the area of the facial canal. The temporo-sphenoidal lobe was uncovered and its dural covering appeared absolutely healthy. Two days following the operation the patient's temperature dropped to sub-normal and the pulse to 48. In the face of these symptoms a brain abscess was quickly suspected and permission to do an exploratory procedure requested. On the advice of an internist, who was called into the case, operative procedure was postponed. He diagnosed a condition of chronic intestinal nephritis, which he said accounted for the slow full pulse. His position was proved by the subsequent course of the case, to be absolutely correct. In a few days under treatment the pulse returned to normal and the patient made an uninterrupted recovery. The facial paralysis which must have been purely peripheral in a short while cleared up entirely. This case is mentioned simply to illustrate the danger that we specialists frequently find ourselves confronted with on account of our extreme enthusiasm in our own limited field of work, and yet in the above case, given a condition of mastoiditis with facial paralysis followed in two days by a drop in the temperature to subnormal with a slow full pulse of only 48 beats to the minute, I must say that the opinion that I held as to the probability of the presence of a brain abscess was, to say the least, not illogical, or far fetched.

(11) Cerebellar abscess may result from extension of infection from a temporo-sphenoidal abscess through the tentorium cerebelli; or it may result from sinus infection. We have seen one case which was the result of a wound with a knife, which when incising the sinus wall was carried through the internal vessel wall into the cerebellar area. The symptoms of cerebellar abscess are pain, low temperature, slow pulse, nausea, vomiting, vertigo, dizziness, staggering gait. Frequent yawning and choked discharge almost invariably present. Slow cerebration, convulsions and paralysis.

Case No. 10.

Mrs. J. F., age 20.

History. Definite history not obtainable, the patient not being able to speak English. Duration of disease since onset of pain about eight days. August 31st, operation. Gas

and ether. Usual operation. Cortex exposed. Sub-cordial cells filled with pus and broken down tissue. Tip and zygomatic cells removed. Dura uncovered under middle lobe. Sinus exposed between knee and bulb. Usual dressing. Post operative condition good. Patient discharged in nine days. September 29th, patient re-admitted. About six days before, patient's face became paralyzed on left side. Severe headache for past five days. Nausea and vomiting yesterday. Fever and general malaise last two days. Vertigo. Patient cannot stand without support. Temperature on admission 102, pulse 102. Patient complained of severe pains in head, very restless, crying out constantly, and finally rolling about in a semi-conscious condition. October 1st. Patient could be aroused. Large crop of herpes labialis, both upper and lower. Temperature 98.2. Pupils react to light. Fundi normal. Pain in neck. Pulse irregular and low tension. Nourishment not well taken. October 2nd. Operation. Gas and ether. The line of the old wound was again incised and the cavity thoroughly cleaned of a mass of unhealthy granulation tissue. The roof and wall of the cavity were not diseased but an area of soft bone was found towards the regenerating tip structure and in that portion of the bone directly over the descending portion of the sinus, extending well into the occipital region. This bone was cleaned out and tissue removed until healthy area presented. The dura mater covering the cerebellum was dark and had a yellowish unhealthy appearance. The lateral sinus was uncovered from knee to bulb. It looked dark and somewhat flabby, though distinct pulsation could be recognized. (I lay no stress on the symptom of pulsation. The cerebral impulse is transmitted and can easily lead one into making false deductions.) The cerebellum was uncovered and the diseased looking area incised in the center. About an ounce of stinking pus was evacuated. The sinus was left intact. The dura under the middle lobe was uncovered, but having a perfectly normal appearance was not incised. The cerebellar cavity was packed with iodoform gauze and usual dressing applied. October 5th. Left eye injected. Cornea anaesthetic. Temperature 100.2. October 6th. Temperature dropped to 96.2, pulse 126. Respiration resembled Cheyne-Stokes, except beginning and ending with deep respiration, not gradually reaching climax as in typical cases. October

15th patient died without having shown any improvement.

(10) Sinus Thrombosis. In itself sinus thrombosis means absolutely nothing from any standpoint, clinical or physiological, other than a mechanical obstruction to the current of venous blood in the sinus referred to. The symptoms which we readily recognize as dangerous and point to the existence of such an obstruction, are only the evidences of a severe septicemia, which this condition in its degenerating process has produced. The path of infection is most frequently by a direct extension through the bony wall in the sigmoid groove. Infection in some cases has resulted through fissures in the bone; also through the infection of the small veins, which drain the infected area and then empty into the sinus itself. Smaller vessels first become thrombosed, and the process extends gradually along the vessel wall until the sinus is reached and material for a septic thrombus deposited for fertilization. The lateral sinus, having its bed in the bony groove, itself already a part of the necrotic process, may become diseased by the continuity of surface.

Symptoms. A typical case will present the following: Severe and repeated chills followed by sudden rise of temperature to 104 and above. The temperature may rise from 98 to 104 or over and return to normal inside of an hour. Hence the necessity of frequent record of temperature, certainly not less frequent than two hours. Pain referable to the mastoid region and that side of the head and neck; metastatic abscesses, and pain along the course of the jugular vein. Pulse and respiration show increase in proportion to the increasing pyemia. Consciousness is generally retained up to the very time of death, although some cases show delirium in all its stages. Fundus charges are frequently present. It is easy to appreciate how any obstruction to the lateral sinus or internal jugular will cause a back pressure on the superior and inferior petrosal sinuses. These congest the cavernous sinns and the ophthalmic being in turn congested, causes the condition in the fundus and makes the picture of a choked disc. These are symptoms of a typical case, but it is of the most vital importance that the disease be recognized before these symptoms occur: for these are simply the unquestioned evidences of septic absorption. We take this opportunity to express our admiration of the contribution

on "Pyemic sinus thrombosis," etc., by Dr. Fred Whiting, read before a special section of the New York Academy of Medicine in 1898. In the more recent years the contributions of Dr. James F. McKernon appeal to me as papers whose scientific value is unlimited, especially those papers referring to sinus thrombosis in relation with children's diseases.

In cases where the presence of a clot is demonstrated, and where, after incision of the vessel, free circulation of blood cannot be established, anything short of ligation and excision of the internal jugular, by which path the systemic infection is completed, is an unwarranted loss of time. The internal jugular should be located in its sheath with the internal carotid artery and pneumogastric nerve. The numerous tributaries of the vein should then be ligated and severed, and the vessel with its infected sheath excised and dissected out from its point of ligation to a point close to the jugular foramen as possible.

Case No. 11.

Mr. P. D., age 32.

History. October 17th. Five years ago patient had a fall from a horse, which was followed by a pain in the ear, tinnitus and discharge. After that there was deafness but no discharge. Six weeks ago patient got water in ear while bathing and has had slight pain in left ear, with foul discharge, sometimes thin and other times thick. No tinnitus. Vertigo at times. No nausea. Fever past week. No chill. Otalgia has gradually become more severe. Paracentesis. Irrigation with bichloride (1-5000) every two hours. Ice coil applied. October 19th. The usual mastoid operation was performed. The patient improved apparently for two or three days. October 22. Temperature shot up suddenly to 104.4. There was no chill, but the patient had considerable pain in the wound. October 23rd. 9:00 a. m. patient had a shaking chill. Eye examination negative. No paralysis. October 24th. Second operation. The wound was re-opened and cleaned. The sigmoid groove was removed and the sinns exposed from the lowest part of the descending portion nearly to the torcular. It was filled with a firm, hard, partially organized clot, throughout the exposed portion. The vessel was ligated at the level of the sterno-clavicular junction, and excised. Patient became gradually weaker and died

two days later. He was perfectly conscious up to within a few minutes before his death.

Concerning this case, I would like to say that I believe that the effect of the cold in this case was a material aid to the development of the clot in the sinus. Furthermore, when there is present a condition of chronic suppuration, on which has superposed an acute exacerbation; when the discharge ceases and the pain increases, under no condition should an ice-coil be applied to that ear. Immediate operation is imperative.

Case No. 12.

M. B., age 6.

History. April 11th. Operation. Gas and ether. Usual mastoid operation. No exposure of dura or sinus. Usual dressing. Discharged April 26th. May 3rd, boy returned to hospital with temperature 104.4, with history of chills and fever. Boy looked sick. Wound area perfectly clean and healthy. Examination of chest negative. Urine normal. May 4th. Temperature 100.2. Patient has brighter appearance and feels better. May 5th. Operation. The sinus was uncovered and freely exposed. It appeared healthy at the knee. When incised a free flow occurred from above, but there was obstruction to the upward current. Incision lower down did not cause a free flow at once. The obstruction was apparently located on the side at which the inferior petrosal vein enters the jugular bulb. A enrette introduced at this point dislodged a small clot and free hemorrhage occurred. May 7th. Patient restless. Temperature 104. Pulse weak and rapid. The condition is evidently one of systemic infection from the septic process which had been going on for some days before the boy was brought to the hospital. May 8th. Condition of collapse continues. Temperature high. Pulse weak and rapid. Patient gradually weakened and died in the afternoon.

The reports of some of these cases are given simply to illustrate the striking similarity between the various forms of intracranial diseases of a pyogenic nature. One cannot fail to be impressed with the likeness of the symptoms which we find in diseases which as a matter of fact are pathologically so entirely and radically different. For instance, in several of these cases after a few days a normal temperature, the chart shows sudden rise with equally as sudden fall. Of course one might say that in all such conditions where a suspicion of sinus thrombosis

exists, one should immediately incise the vessel and make a search for any suspected clot, and in a great many cases this practice will be of inestimable value to the patient because of the promptness with which it has been done. But I hold that inasmuch as there are intracranial diseases simulating so closely the clinical picture of sinus thrombosis, but which would be seriously retarded in their course and perhaps their chances for recovery much lessened by any operative procedure upon the sinus itself, whereby the blood pressure within the skull and meningeal vessels would be raised, it becomes a matter of more than serious importance to determine the proper method of procedure.

The message which I hope this paper will carry into the minds of the profession at large is, first, the seriously dangerous nature of the complications which we find as a result of chronic suppuration of the middle ear. Second, the extreme difficulty of making an accurate diagnosis of the actually existing conditions in spite of the fact that some of the text books present to us classical symptoms from which it might be judged that diagnosis of these conditions is not a matter of such difficulty. Third, the keynote of the whole message is centered in the one thought that chronic suppuration of the middle ear is curable, thereby making complications preventable. In consideration of the fact that the operation for the relief of chronic suppuration is not in itself one of much seriousness, and if done by competent hands with a certain amount of care there need be no fear of injury to the facial nerve, or of any other untoward results, we may well proceed to the consideration of the main factor, which is the eradication of the entire area of diseased bone confined within the middle ear and from which these various diseases of such dangerous character are propagated. I would strongly advise against temporizing in any way with the condition of chronic suppuration. As soon as one is satisfied of the presence of diseased bone advise the removal of that tissue on the ground that it is a constant menace to life and may produce at any time without the slightest warning, inflammatory conditions of the brain and its associated structures which may defy the greatest skill, and go quickly to a fatal termination in spite of the most active treatment. Chronic suppuration is a surgical disease; it is curable. When the profession comes to the point where it so

regards this condition then we shall have fewer reports of the various types of intracranial diseases, less difficulty in determining the nature of these diseases when they do appear, and a larger number of cases which will go down on the record as being cured.

P. S.—I have used in this paper some material from my previous writings on this subject. It will be noted that some of the cases herein quoted do not show a history of chronic suppuration, but they represent the type of cases associated with this disease and are given for that reason. Within the past month I have excised an internal jugular vein for the relief of a lateral sinus thrombosis, and while the patient is well on the road to recovery I will not publish the case in full until the boy is discharged cured.

SALVARSAN IN THE TREATMENT OF SYPHILIS AND PARA-SYPHILIS OF THE NERVOUS SYSTEM.*

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It is probable that in most cases of syphilis in the secondary stage, spirochaetae lodge, grow and develop in the meninges and perivascular lymph spaces of the brain and cord. While it is true that meningeal symptoms occur in only about three per cent of syphilitics in the secondary stage, yet, no doubt, the meninges become affected in practically all cases. Because the spirochaetae lodge in the brain and cord is no sign, however, that the micro-organisms will not be destroyed either by specific treatment or by active immunity.

When salvarsan was first introduced the nervous symptoms of syphilitics were observed closely for any abnormalities that might arise. Experience has shown that the drug itself has very little, if any, deleterious effect upon the nervous structures, but we have learned that the syphilitic virus attacks the nervous system oftener than we suspected.

When spirochaetae grow and develop in the brain and in sufficient numbers to produce structural changes, we may then say the patient has syphilis of the brain. If the lesions are only slight, the patient may get well and no permanent damage result. It is only too frequent, however, that the

changes are permanent. The spirochaetae may die, but the delicate structures of the perivascular lymph spaces are organically involved and there are permanent disturbances in the nutrition of the nerve cells. If these structural changes become extensive in the absence of spirochaetae, the condition is then known as para-syphilis, but it is probable as our knowledge becomes more complete, we will learn that many of the conditions that we now regard as para-syphilis are really syphilis. Only recently J. W. Moore of the Central Islip State Hospital has reported finding the syphilitic organisms in twelve parietic brains, and he is of the opinion that paresis is really a syphilis of the brain. In fact, it is almost impossible to tell whether we are dealing with syphilis or para-syphilis of the nervous system. It is very probable that in the first lesions of the diseases we call para-syphilitic are really syphilitic and it is almost impossible to draw a distinct line between the two diseases. The first symptoms of locomotor ataxia may be due to a diffuse syphilitic meningitis of the spinal cord and under active treatment, may apparently recover. Some cases of diffuse syphilitic meningitis may show distinct symptoms of paresis, yet when placed under active treatment, recover and remain well. Of course, in these cases the spirochaetae are destroyed and the organic changes are so slight as to cause no permanent damage to the nerve structures.

Whether salvarsan has a detrimental effect on the nervous tissues is still somewhat of a mooted question. Some have claimed that the nerve relapses after its administration have been greater than after the old method of treatment, but the evidence is against the relapses being due to salvarsan, but to the syphilitic virus itself. The probable reason that these relapses are apparently more frequent after salvarsan than mercury, is because we watch the patient more closely for such symptoms. After the degenerative changes in the nerve tissues are marked, it is probable that salvarsan, especially in large doses, hastens their destruction.

During the past two years I have used salvarsan in six cases with general paresis, one case, locomotor ataxia; one, cerebral syphilis, and one apparent meningeal involvement in the secondary stage of syphilis.

Case No. 1. W. D. Man. Age 45. Had syphilis fourteen years ago. First came under my observation June 12, 1911. Had delu-

*Read at meeting of Medical Association of Georgia, Savannah, Ga., 1913.

sions of grandeur. Thought himself immensely rich. Very restless. Thought he had much business to attend, too. Knee jerks exaggerated. Pupils unequal and react slowly to light. Memory for recent events very defective. Wassermann reaction positive. Salvarsan was administered July 20, 1911.

In two or three weeks the mental symptoms improved. On August 25 the second intravenous injection was given, and on September 20 the third. About this time patient became very much improved, left the sanitarium, went home, and did light work. His mental symptoms were so much better that the members of his family actually thought he was well. The knee jerk, eye symptoms and the muscular tremor still persisted. I told his relatives that he was not well, but it was hard to convince them that he had not recovered. Later on I gave this patient two doses of salvarsan, three days apart. He remained much improved until January, 1913, when he relapsed very suddenly and is now in a practically demented state.

Case No. 2. T. M. Man. Had syphilis ten years ago. In 1910 developed general paresis. Came under my observation October, 1911, with typical symptoms of general paresis, followed by a remission which had lasted three months. This patient received five doses of salvarsan, two to four weeks apart. There was absolutely no improvement in his condition and he was removed to the asylum in March, 1912.

Case No. 3. Patient age 42. Family history good. Denies syphilis. Relatives refused Wassermann reaction. First came under my observation May, 1912. Delusions of grandeur present. Exaggerated knee jerk. Double vision. Diagnosis, probably paresis. Two doses of salvarsan administered, two weeks apart. Mental symptoms cleared up very rapidly and patient returned home. I understand that this patient has since relapsed and is now in a worse condition than ever.

Case No. 4. H. L. Man. Age 47. Family history good. Had syphilis seven or eight years ago. Broke down with nervous collapse in 1909. Came under my observation February, 1912. Knee jerk exaggerated. Pupils equal and react to light. Patient much demented and occasionally had delusions of grandeur. Diagnosis, general paresis. Patient was given three doses of salvarsan, a month between each injection, with-

out any improvement. Patient continued to grow worse, and died November, 1912.

Case No. 5. Man. Age 40. Family history good. Drinks to excess. Was taken sick during 1910 and continued to grow worse. First came under my observation October, 1910. Suffered from severe headache. Paralysis of sixth nerve. Pupils react to light. Patient considerably demented. Has a few grandiose ideas, but most of the time depressed. Diagnosis, cerebral syphilis. Patient was given mercurial inunctions and large doses of potassium iodide. Patient continued to improve and became very much better. In October, 1911, salvarsan was administered and he improved very rapidly. Later on two doses of salvarsan were given. This patient now is practically well, except that he has a slight defect in his memory. His knee jerk is still also exaggerated.

Case No. 6. Man. Age 52. Had syphilis twenty-two years ago. Has had pains in the lower extremities for the past three or four years, and during the past two years has had difficulty in walking, especially in the dark. Argyll-Robertson pupils. Typical case of locomotor ataxia. Salvarsan was administered October, 1912. In two or three weeks patient stated that he felt much better, the pain was less and he had less difficulty in walking. His physical symptoms, however, still persisted, though he is still at work as a carpenter.

Case No. 7. Man. Age 22. Contracted syphilis October, 1912. December, 1912, after a thorough mercurial treatment, developed headache, slight fever and general malaise. Salvarsan was administered intravenously, and his symptoms immediately cleared up. The diagnosis of this patient's case is not certain, but I am inclined to think that he had syphilitic meningitis. This patient is still without symptoms and is undergoing treatment.

In conclusion, it may be stated that in true cases of general paresis, salvarsan is valueless, and in advanced cases probably aids the destruction of the nerve elements, but in cases of cerebral syphilis, whether during the secondary or the tertiary stage, the drug in conjunction with mercury is valuable, and should be given in frequently repeated doses. Salvarsan destroys the spirochaetae, and if we are able to kill the germs in the meninges, it is only reasonable to suppose that results will be good.

THE PHYSICIAN—HIS DUTIES AND OBLIGATIONS.*

R. B. Barron, M. D., Gray, Ga.

Gentlemen of the Medical Association of Georgia:

The above subject is very broad and susceptible of many and varied views and interpretations dependent entirely from the viewpoint that each of us take of it, and while my treatment of the subject may not coincide entirely with that of any of you, what I may have to say will be my convictions. I shall endeavor to treat the subject under four different phases:

1. Duty of the physician to the public.
2. To his patients.
3. To himself.
4. To the profession.

I am one of those medical men that think that simply because a man elects medicine as a profession that he should not stop there and have no opinions or views as to other affairs, but on the other hand I hold that he should be active in all things that pertain to the advancement and interest of his community and seek by his voice, influence and vote in city, county, state and nation, to advance the material prosperity and well-being of his fellow-men and country, and who is more capable and well qualified to do this than the active, well educated physician, for certainly there is no class of men that come in such close contact with people of all classes as the doctor, and none know their needs and necessities as well as he. When our views are sought on any live subject of the day, instead of being satisfied as the most of us are, to merely express a half-hearted opinion, we should deem it a privilege and duty to ourselves and the public to make our opinions and convictions felt and our suggestions followed. In so doing much good to the country would result and many people would be benefitted. So negative is our position in the business world that whenever any of us have nerve enough to make our convictions and ourselves felt and recognized in any affairs other than medical, we do so often at the expense of our professional success. "He is interested too much in public affairs," many will say, "I want a doctor who is wrapped up in his profession," just as if all work doesn't make Jack a dull boy, and as

if the medical man who is nothing but medical doesn't develop into a crank. Why, my friends, are things thus? Simply because we fail to place ourselves in the proper light before the public, in a business way, and impress upon it our importance, so much so is it indeed that it has become a trite saying that even in a professional way we are void of any business or executive ability, and are not to be reckoned with on that line.

How often at settling time do our patients express a disbelief in and a mild contempt for our business ability, by demanding a reduction of their bill and presuming to fix our charges. Do you think we resent this blow to our pride and to our business acumen in the same degree that they would were our position reversed? Ours is the fault, and let us remedy it. Don't everybody, even the women of the clubs, take more interest in the live questions of the day than we? Don't let all classes be considered more business-like than we. There may not be Rockefellers and Pierpont Morgans among us, but we can show the public that we have good hard horse sense, not latent but active, and to be used on all occasions.

2. Duty of the Physician to His Patients.

There is no hard and fast rule that can be irrevocably fixed as to the duty of the physician to his patients, as there are so many different kinds of humanity that various people and their ills have to be approached and attended on entirely different lines, but, of course, there is one cardinal maxim that should govern all physicians in the treatment of diseases, and that is to make the patient as contented and comfortable as is consistent with their well being, and to restore them to health and strength at the earliest moment possible; but, alas, in doing this there are always many breakers, and often in avoiding Charybdis we run upon Scylla. We have all kinds, classes and various conditions to attend, and frequently it is a very knotty problem as to what is best and most advisable for them. I have often heard physicians speak of giving placebos and in days long gone by I have heard of bread pills and water sweetened with sugar being given, and so far as I know there may be in this day and generation some physicians that resort to these subterfuges. I do not think that under any circumstances is a physician justifiable in practicing a deception upon a patient, insofar as to make them

*Read at meeting of Medical Association of Georgia, Savannah, Ga., 1913.

believe they are getting medicine when they are not. I think it by far better to tell the patients that they need no medicine, and let it go at that. I am constrained to believe that the physician who deals fairly, squarely and justly with his patients will be more highly esteemed by them and more successful in the long run than one who resorts to deception.

In my thirty years of practice one of the most persistently annoying questions that my judgment has had to grapple, and is still grappling with, for like Banquo's ghost it will not down, is the number of visits that should be made to a given patient, that question the younger men of the profession will say depends upon the sickness. If you follow that rule, young man, you will lose the practice of some good patients, good financially, for one often meets in his practice nervous creatures, hysterical, not seriously ill, really needing only an occasional visit, but who imagine themselves afflicted with all the ills that flesh is heir to, and want to be visited accordingly. If we err, let it be by making too few visits, have conscience on our side, for a good conscience is harder by far to get than a good patient, and the patients, unless in acute sickness, will get along if they have a willing mind.

I wish to notice in this connection the tendency among the better class of physicians to give less and less medicine, and to give no medicine at all unless there is some special indication for it. Again I tell you, young men, if you follow this tendency you will find as I have done, that those of your patients who don't want to diet, who don't want God's medicines, light, water and air, but are bent on having medicine made by man, will leave you for those less scrupulous who will play upon their credulity and pocketbooks, and convert their stomachs into animated apothecary shops to their hearts content, but, friends, if you give medicine only when a condition requires it, and withhold it when you see no absolute necessity for it, what reward is there? The knowledge of duty done and a clear conscience, which in medicine, as in everything else, is more to be desired than gold, yea, than much fine gold.

3. Duty of Physician to Himself.

The physician has a most strenuous time usually in paying the duty he owes to himself, for oftentimes he hardly knows where

the other fellow ends, and he begins, indeed, there is no individuality to him, being entirely engrossed in rendering services to others, he loses sight of self. In a certain measure I have little or no remedy to suggest as regards the busy general practitioner, but our friends, the specialists, often reach that dignity and they may possibly be able to make some improvement upon the life and lot of the general practitioner, but this I do say, gentlemen, that no man as a physician should lose sight of the fact that we are only flesh and blood, and need rest and recreation the same as other human beings, and we should try to arrange our affairs of life so as to have time for some pleasure and even frivolities, not losing sight of that most important of all things to the medical man, the interest and well being of our patients.

Many a good man and true in his devotion and attention to his duties in our profession has sunk self into nothingness, lost sight of his own physical well being in his endeavor to serve those that are entrusted to his care, and found out when it is, alas, oftentimes too late, that his health is gone, his vitality sapped, all because he did not in his arduous and exacting duties stop long enough to consider self.

Again, there is a duty that a physician owes not only to himself, but also to his family, and I deem this a proposition that most of us pay entirely too little attention to in more ways than one.

Every physician should try to give a certain portion of his time to his home life, and none should be carried away and so engrossed with his professional duties as to forget for one moment what is due to home and those that are dependent upon him.

While we know that no man would be worthy of the name of physician that entered the profession simply for the purpose of making and hoarding money, still with the physician, as in every other calling, it is essential that he try and accumulate some money to maintain himself and those dependent upon him. Far be it from me to encourage the spirit of commercialism (that now seems to have become rampant in the many other callings of life) among the medical profession, for I think that to be one of the most undesirable attributes that could possibly possess a physician, and still I would not in the least minimize the fact that in dealing with our financial affairs that we should have a clear insight of them and seek

always in a strictly professional way to have something to have and to hold as our very own, and not be known as a near well and impecunious class; in short, give good and faithful service, make fair, just and legitimate charges, and of those that are able to pay demand and receive compensation for the services rendered, and make an investment of some portion of the funds received, looking to a competency in our old age.

4. Duty of the Physician to the Profession.

I now enter upon the fourth and last phase of the subject, and if possible I consider it of more vital importance than any other touched upon, for upon it the whole structure is built, and no man can truly be a physician in the broadest sense of the term who does not fully understand and strictly carry into effect that understanding of his duty and obligation that he owes to his professional brethren.

I have not written this paper for the purpose of entering into the discussion of professional ethics, nor shall I do so, for I shall dismiss that part of the subject matter by the statement that a knowledge of professional ethics is most desirable and the code is rarely violated by men that wish to do right, and is rarely followed by those that do not wish to do right. I wish to state further in this connection that all the codes of ethics in the universe are no good to men who care next to nothing for their duty and obligation. I wish to state here and now that what I may say hereafter has no reference or allusion to any member of this association, but are some of the things that I think possibly might be of benefit to all of us to fully consider.

It is almost a proverb among the laity that there exists among the medical profession a deep and almost consuming professional jealousy of our confreres. I often hear it and pooh-pooh the idea, but I hear it again from the same people. Why is it so? Certainly there must be some good grounds for it, else there would not be such credence given to it by intelligent conservative and conscientious people, and I am constrained to believe that we as doctors must be responsible for it, and that were we to do fully our duty one toward the other, that such statements would cease to be made about us; but alas, my friends, we do not do all that we should one toward the other, indeed we do many things that we should not and

leave undone many things that we should do, and that is wherein much of the gossip and criticism, as regards our professional jealousy, begins.

I hold, my good friends, that when I hear the good name of a professional brother assailed from any cause, knowing him to be tried, true and worthy, that it is as much my duty to protect him and seek by all honorable means to defend his character and worth, as it is to treat him courteously and professionally when I see a patient with him, and not when I hear him assailed to dismiss the matter with a wink of the eye, shrug of the shoulders, or a wave of the hand and let the party making the assertion draw what conclusions they wish. The man who does act in this manner either does so owing to a lack of due appreciation of his duty to his professional brother, or to some sinister motive, and those things have been done and no doubt will be done again.

Again I wish to say that there should always be a right and square dealings between physicians; one should never, from any cause seek to get the better of the other. We should never in our desire for practice forget what is due the other. Of course we all desire practice. All of us cannot have, but we can hope for a large and lucrative practice, still it does not always follow that because a man has a large and lucrative practice, that he is any better equipped for his work than some of the profession who have by far less practice. The medical profession, like many other things, has its fads and its fancies, and I beg to assure you that I have known some very capable men who have made almost failures as to their practice, and on the other hand I have known some very mediocre men who made more than a fair success, and neither does it always follow that the most successful are those that most fully appreciate and realize the duty and obligation they owe the profession.

It is a sad commentary I make when I say the medical profession has not been and is not now banded together in the bonds of friendship, and we as a profession do not pull together for mutual advancement and protection as we should. As an illustration see how small is the number of county medical societies in the state. In short, it does seem as if most of us wish to play a lone hand and let the other fellow take care of himself, or to use a more familiar expres-

sion, "It is every man for himself and the devil take the hindmost."

Gentlemen, I hold that we as medical men should ever seek in every way possible to help ourselves and each other in a professional way, and the best way that this can be done is in each of us feeling that our interests are the same. Let there be no cuts in prices or the fee bill. When we are approached by our patrons seeking a reduction of their bill, inform them that we rendered the best services we could and that we must insist on the payment of the bill, as it is in accordance with the fee bill. Think not, gentlemen, that in reducing the price that we make a favorable impression upon the patient; while he seemingly appreciates it at the time, sooner or later he comes to look upon the party making the reduction as a cheap doctor, and but few people, if they be intelligent, wish that kind of man for their physician.

Let us stand shoulder to shoulder in our charges as in everything else, and not think for one moment that if we cut prices, it will not sooner or later redound to our own injury.

Again, my friends, one of the greatest duties of the medical man is to be present as often as possible at the meetings of his local medical society, as well as at his district and State Medical Association. It keeps us in touch with the profession better than anything else possibly can, and no medical man can afford not to help to his uttermost his local society, for it is through this that our district, state and national societies are now kept going. By all means attend the local societies, read papers when you are asked to do so, and if you don't care to read papers, lend your presence and assist in discussing papers read by others, and though you may think that you will receive but little benefit from your attendance, I beg to assure you, in thinking that way you are vastly mistaken, for I don't believe any medical man has ever heard a medical subject discussed by a body of intelligent medical men, that he did not learn something; then, gentlemen, let us ever be loyal and true to our local societies and aid them with our time, our talents and our means.

In conclusion let us ever be mindful of the interest of each other; let us never fail to treat each other fairly, squarely and justly, take no undue advantage in any way, shape or form; let us never be led to do any-

thing that is not in strict conformity with both the spirit and letter of the law in our desire for practice and preferment, ever keeping in mind to "Do unto others as we would have others do unto us," and never let there arise among us any contentions, unless it be that contention or rather emulation of who can best work and best agree.

March 14, 1913.

PITUITRIN.*

Marion T. Benson, M. D., Atlanta, Ga.

During the past ten months I have used pituitrin seventy-seven times in private practice.

Case No. 1. Mrs. O., age 28. Multipara, third baby. I had been with Mrs. O. with her previous confinements; first lasted twenty-four hours, second sixteen hours. When I was called to third confinement she had been in labor two hours. I used 1 c.c. pituitrin and labor was finished in forty-five minutes. Normal presentation.

Case No. 2. Mrs. C., age 27. Multipara, second baby. First labor took place in another city. She reported very hard labor with forceps delivery. I was called to see Mrs. C. soon after her arrival in our city; found her in a highly nervous state over fear that she was pregnant. She had been told by her previous physician not to get pregnant on account of difficult labor and symptoms of tuberculosis. Found that she was not pregnant, but had very badly lacerated cervix, which I repaired. In eighteen months I was called to her second labor; she had been having pains for four hours and was beginning second stage of labor. When I arrived I used 1 c.c. pituitrin and labor was finished in thirty minutes, without laceration.

Case No. 3. Mrs. F., age 23. Primipara. One c.c. pituitrin used in first stage of labor; was finished in two hours.

Case No. 4. Mrs. B., age 28. Primipara. Had been in labor eight hours when I arrived. Os dilated about size of a fifty-cent piece. Pains regular, but not much force. I used 1 c.c. pituitrin; pains were increased but not sufficient to bring about delivery. After an hour I used 1 c.c. pituitrin again, but this failed to bring about delivery. Finally was delivered with forceps.

*Read at meeting of Medical Association of Georgia, Savannah, Ga., 1913.

Case No. 5. Mrs. J., age 30. Primipara. Very large and stout. Had been in labor fourteen hours. Similar to case No. 4. Pains increased, but not sufficient to expell child. Forceps delivery.

Case No. 6. Mrs. S., age 23. Primipara. One c.c. pituitrin used in second stage; labor finished in forty minutes. Normal.

Case No. 32. Mrs. S., age 32. Multipara, fourth labor. Found patient in second stage of labor, pains about every ten minutes with little force. Used 1 c.c. pituitrin; pains were not increased. After waiting one hour used 1 c.c. pituitrin again, but this did not increase pains; they stopped entirely. Out of the seventy-seven cases this is the only one in which I failed to increase oxytocic action.

Case No. 37. Mrs. H., age 22. Second labor. I was with Mrs. H. first labor, which lasted thirty-six hours, with forceps delivery. The second labor I used 1 c.c. pituitrin after she had been having pains for five hours. This was at second stage. Child well up in pelvis; in thirty-five minutes was delivered.

Case No. 70. Mrs. G., age 21. Multipara, second labor. I was with Mrs. G. first labor; after being in labor twenty-four hours was delivered with forceps. Second labor pituitrin was used in second stage with child well up in pelvis, and in thirty-five minutes labor was finished.

Case No. 73. Mrs. H., age 40. Multipara, eighth labor. When I arrived found her in second stage with child well up in pelvis; pains every ten minutes. After using 1 c.c. pituitrin child was delivered in twenty minutes.

Case No. 74. Mrs. M., age 38. Multipara, seventh child. I had been with Mrs. M. with two children. She had been having slight pains with severe pressure on back for three to four hours. Found os dilated, but no regular uterine contraction. I gave 1 c.c. pituitrin and in ten minutes pains were regular every three to five minutes, but not sufficient to bring about delivery. After waiting an hour and a half I gave 1 c.c. pituitrin again. Labor was then finished in thirty minutes.

Case No. 75. Mrs. H., age 30. Multipara, third baby. I had been with Mrs. H. once before. When I saw Mrs. H. found that she had been having slight pains about six hours. Cervix dilated, but pains not sufficient to bring about elivery. I used 1 c.c. pituitrin and in twenty minutes labor was finished.

The beauty of pituitrin is shown in these last two cases. Its oxytocic is very great in

multiparas. It is the only remedy that I have found that you can depend upon without any complications. Before I began the use of pituitrin I have sat up many a night waiting for pains to set up after the cervix was dilated, and these multipara cases were a great worry, as you could not go off and leave them, but now pituitrin has made them a pleasure, as its oxytocic action is wonderful.

Of these seventy-seven cases reported here twenty-seven were primipara, fifty multipara. Of the twenty-seven primipara, fourteen cases were delivered naturally and thirteen by forceps. In these thirteen cases pains were increased to a marked extent; seven were of abnormal presentation.

Of the fifty multipara, pains were increased to a marked extent except in one; forty-four were delivered in twenty minutes to two hours, six were forceps; of these six, three abnormal presentations.

I find after the labor is finished the patient is in much better physical condition. The child seems to be in much better physical condition, whether this is due to quick delivery or to the effect of the pituitrin upon the heart I am unable to state. In the multipara cases very few had after pains, and where I did have such they were ceased in ten to twelve hours.

I find also uterius stays contracted. The lochia flow is healthier. I have discarded the use of ergot entirely. Have had hemorrhage in one case, which was early stopped by packing vagina with cotton. This case was after use of forceps. Did not have return.

Technique. It is important to use fresh preparations. The syringe must not contain particles of any other substance, particularly alcohol, as this interferes with the action of the agent. I find that you get better results when injections are made subcutaneously in gluteal region, not in muscles or fat, just under skin.

It is also important to be careful in not giving chloroform before the child's head is pressing upon the perineum.

If chloroform is given early it retards the action of pituitrin and labor is delayed or second injection of pituitrin is required.

An advertisement in The Journal of the Medical Association of Georgia will bring results. Rates sent on request.

INFANT MORTALITY.*

Noel M. Moore, M. D., Augusta, Ga.

Estimates based on statistics from the registration area of the United States representing 58.3 per cent of the total population show that in 1910 one out of every five deaths in the United States was that of an infant under one year of age, and that approximately 260,000 infants under that age died during the year. It is further estimated that about 50 per cent or 130,000 were due to preventable causes. So great is this mortality during the early days of life that the chances of a new born child living a week are less than those of a man of ninety.

The United States is the only civilized country in the world that does not require birth registration, consequently our statistics are deficient in certain important aspects, but the mortality rates, exclusive of still-births, as reported from the registration area, may be accepted as accurate. Unfortunately no Southern state, excepting Maryland, Missouri and Kentucky, is in this area; consequently in attempting to arrive at some conclusion on infant mortality in Georgia we have to rely largely upon statistics based on conditions existing in the northern and western parts of our country. Statistics based on the census of 1900 showed that out of nine cities having the highest infant death rate, seven of them were southern cities. This in spite of the extremes of temperature, congested population, and the large foreign element in the great northern cities. I do not believe any such condition holds true at the present time, for most of the southern cities have shown a consistent diminution in infant mortality during the past few years, largely owing to our boards of health making it possible for citizens to procure a purer milk, but our statistics still suffer in comparison with those of other cities where an organized effort has been made to reduce infant mortality.

It is not sufficient that we plead poverty and a large negro population to account for our high general death rate. I dare say that every city in Georgia is paying more for police and fire protection than it is paying for health protection; and the reason they are not appropriating sufficient funds for this purpose is that the medical profession has not presented the facts to the people and edu-

cated them as to what may be accomplished by preventive medicine. The Department of Health of New York City asserts as a maxim that "Public health is purchasable; within natural limitations a community can determine its own death-rate," and well it may make this assertion, as shown by the wonderful results attained in that city.

It has well been said that the problem of reducing infant mortality is 20 per cent pure milk and 80 per cent education of the mothers; and working on this basis in New York City the mortality rate for infants under one year of age was reduced from 288.9 per thousand infants in 1880 to 133.9 per thousand in 1910. However, up to 1908 this problem of infant mortality was only attacked during the summer months, and it was not until that year, when the Division of Child Hygiene of the Department of Health was established, that the 80 per cent part of the problem representing education was conducted along a definite scientific plan. The year previous to the establishment of this Division of Child Hygiene the infant death rate was 160 per thousand, the year after it was 144 per thousand, in 1910, 134 per thousand; in 1911, in spite of the unusual heat of that summer, there were 1,182 fewer deaths under one year of age than during the previous year, and during 1912, up to September 1, the rate had been reduced to 113 per thousand.

In brief the Division of Child Hygiene has control of all public matters affecting children from birth to puberty, and is accomplishing its wonderful results by supervision of the vital statistics and work of the visiting physicians and district nurses; by establishment of milk depots and Little Mothers Leagues, and by a campaign of education conducted by means of the newspapers, lectures and distributed circulars.

That infant mortality is excessive and that it is perfectly possible to reduce this to a marked degree are incontrovertable facts; the problem is how to proceed in this campaign. I feel that in the large cities of our state the 20 per cent part of the problem is being efficiently handled by our Boards of Health, but the 80 per cent representing education of the mothers is being sadly neglected. To think that our Boards of Health, however efficient their medical officers, can accomplish the best results so long as these boards are largely composed of laymen and are bound by the shackles of local politics,

*Read at meeting of Medical Association of Georgia, Savannah, Ga., 1913.

is chimerical. Every county and municipal Board of Health should be created by legislative enactment, so that their ordinances may be operative as law when passed and not subject to review or amendment by town councils or boards of county commissioners; and I urgently urge as one of the most important future endeavors of our State Association the placing of every county Board of Health under the unfettered management of the County Society. This will not prove the herculean task one might suppose at first thought, as shown by our efforts along somewhat similar lines in Augusta. The medical faculty in that city decided that all medical charities should be under the control of the faculty of the medical college. A definite plan showing in dollars and cents how in spite of an increased appropriation the city would save money by such an arrangement was first presented to the citizens and then to the council. As a result of this campaign of publicity by the medical profession the appointment of the city chemist, bacteriologist, city physicians and district nurses were placed in the hands of the faculty and they were also given absolute control of the city hospitals. This plan met with the cordial endorsement of the medical officers of the Board of Health, and after one year's trial, although many details remain to be perfected, official Augusta is congratulating itself upon the arrangement and our sick poor are getting better attention than they have ever gotten in the past.

Our county Boards of Health, no longer subservient to a body of politicians, could then inaugurate such measures of prevention and education as have proven in other states to result in a greatly reduced death-rate. This will take more money, but if you will show the people, as you can, that it is a wise investment, the money will be forthcoming to the limit of their ability. What a decrease in infant mortality, for example, could be secured by even informing every mother that a breast-fed baby stands six times the chance of living that an artificially fed infant does; that at least 90 per cent of mothers can nurse their offspring, and that when an infant has to be given cow's milk it should be pasteurized or boiled during the hot summer months.

In Augusta we hope to carry out our campaign of educating the mothers by perfecting our birth statistics, and this is our hardest problem, then by directing our district nurses to visit the mothers in their

homes and instruct the mother in the care of the infant and urge them to bring their babies to the clinic at the first indication of illness. If too ill to be carried to the clinic they are instructed to telephone the University Hospital, when a physician will be sent to them and a record of the case kept at that institution. If at any time it is thought wise the case is transferred to the Children's Hospital. In a series of letters now being published in one of the daily papers under the direction of the president of our Board of Health, these mothers will be informed concerning the most important facts of infant hygiene.

Conclusions.

1. That education of the people is the most important single factor in reducing our death-rate.

2. That vital statistics, including birth registration, is essential.

3. That the State Medical Association should make every effort to have a law passed requiring vital statistics in Georgia, and that it should urge the county societies to endeavor to have their Boards of Health created by legislative enactment and placed under their control.

References.

¹Transactions of American Association for Study and Prevention of Infant Mortality.

²Boston Med. and Surg. Jour., Feb. 15th, 1912, p. 242.

³Hygienic Laboratory Bulletin No. 41.

⁴American Journal of Diseases of Children, Vol. 5, No. 2.

The more money The Journal of the Medical Association of Georgia makes out of its advertisements the less it costs the State Association to run the paper. This means that every member of the State Association has an interest in the advertising columns. If one business firm advertises and another does not, patronize the one that does. It is money in your pocket.

The medical profession of a given community is to be accepted as it is found, and has its own standards of knowledge and methods of treating cases; a scientific leader in a given community keeps the doctors apace with the times, while a political leader allows the doctors to degenerate or remain at a standstill.—Pittsburgh Medical Journal.

LOCAL ANAESTHESIA.

Ralph Duffy, M.D., Plant City, Fla.

Local anaesthesia in major surgical work may be said to have had its beginning in the discovery of the anaesthetic powers of cocaine, though this alkaloid is but poorly adapted to that end. It is too toxic for massive infiltration.

The names of Schleich and of Reclus are indissolubly connected with the use of cocaine in operations of any magnitude in surgery. It is through the researches of these two surgeons that the use of cocaine in dilute solutions (one-fifth of 1 per cent) was popularized. Schleich's book (*Schmerzlose Operationen*, 1894) gives the status of local anaesthesia at that time and practically up to the advent of novocain in 1905.

Prior to the advent of novocain it was possible to do major work more or less successfully without general narcosis. A number of operators both in this country and abroad have published cases of amputations, tracheotomies, thyroidectomies, even laparotomies.

The method, however, to judge from reading these reports, was not one to make us very enthusiastic. The cases of death from cocaine poisoning were frequent. Cocaine, too, cannot be properly sterilized. Also the number of cases in which the anaesthesia was insufficient was very large, and in short the advance in finding a substitute for general anaesthesia was very slight.

Quite a number of substitutes for cocaine have been brought forward and are still to some extent used. The first of these was tropacocine, discovered in 1894 by Gisel. This anaesthetic is certainly less toxic than cocaine, but its effect is fleeting, and it has never enjoyed favor as a local anaesthetic, other than in spinal anaesthesia. B-Eucain (1900), Stovain (1904), and Alypin (1905) are all drugs which have had ardent advocates, but which have failed to achieve popularity as local anaesthetics for infiltration work, though both Alypin and B-Eucain are quite efficient on mucous membranes.

With the advent of novocain in the field in 1905 and the combined use of suprarenal extract an entirely new era arose in the history of local anaesthesia. Novocain comes far nearer to being an ideal local anaesthetic than any hitherto brought forward. Its salt

with hydrochloric acid is freely soluble in water and can be boiled without decomposition. Injection is painless. It is non-irritating to the tissues; and lastly and most important of all, it is, in dilute solution, of very slight toxicity, at least twenty times less toxic than cocaine.

The one drawback to the use of novocain is the transient character of the anaesthesia it produces. Shortly after its introduction this difficulty was appreciated, and it was suggested to combine suprarenal extract with the novocain to "lock" the anaesthetic in the tissues.

For some time past I have been replacing general anaesthesia as far as possible with local anaesthesia in the domain of major surgery. German surgeons have been most active in developing this branch of surgery and I have used entirely the methods and solutions of Axhausen, Lawen, Bier, Hartel, Hakenbruch, Nast-Kolb, and especially of Heinrich Braun of Zwickau. In this country Hertzlar of Kansas City, Mitchell of Washington, and Harris of Chicago have done considerable work along these lines.

I have used novocain exclusively. The solution varies in strength from one-fourth to two per cent, according to the use to which it is applied. Following Braun's technique, we differentiate between infiltration of the immediate field of operation (infiltration anaesthesia) and anaesthesia of the nerve trunks at a distance from the incision (conduction anaesthesia). For the injection of nerve trunks the 2 per cent solution is used; for infiltration from one-fourth to one-half per cent. Normal salt solution, made from distilled water, is the solvent used. As to the amount of Novocain which may be injected, I have used frequently 200 c.c. of the one-half per cent solution, which equals one gramme or sixteen grains of the novocain. Suprarenal extract in some form is always added. Adrenalin (5 to 15 drops) or suprarenalin may be used. I have always used the tablets of the synthetic suprarenin, and in the proportion advocated by Braun of one part of suprarenin by weight to one thousand of novocain. In practice I boil the salt solution and then add the novocain and suprarenin and boil for one minute. Suprarenin will not stand longer boiling without decomposition.

Hoffmann and Kochmann (*Deutsche Medizinische Wochenschrift*, 1912, No. 48) advise

the addition of .4 per cent potassium sulphate to the salt solution, claiming that thereby the novocain percentage can be decreased. I have not been able to convince myself of the truth of this.

Braun in his latest article (*Zeitschrift für Chirurgie*, No. 35, Aug. 30, 1913) admits that the novocain anaesthesia is intensified by potassium sulphate, but advises that the percentage of novocain for mass infiltration be not less than one-half per cent.

In the same article, Braun, commenting on some cases of novocain poisoning which have recently appeared in literature, would refer these accidents to decomposition of the novocain before use. He advises boiling the solution in porcelain and not in glass, to avoid decomposition of the alkaloids by the alkali of the glass, and to add a trace of HCL.

On the limitations of dosage of novocain, Braun says (*Lokal anaesthesie*, page 207) "1.25 grammes of novocain can be injected in one-half per cent solution (250 cc.) without fear of toxic symptoms. In 2 to 4 per cent solution one should not exceed .8 of a gramme (40 to 20 cc.)."

With the above solution, I have myself performed a moderate number of major operations with perfect success. I have in general used a preliminary hypodermic of morphine and hyoscine, or of morphine alone. I have never used preliminary doses of veronal, hedonal, pantopon, etc.

Any and every operation on the scalp can be performed with novocain suprarenin. I have done a simple trepanning painlessly and believe that any form of skull flap can be done also with success. Braun gives methods of approach to each of the three divisions of the fifth nerve, allowing anaesthesia in any part of the face and mouth. The advantages of local anaesthesia in such operations as removal of the superior maxilla and of the tongue are obvious. It does away with shock, hemorrhage and the danger of post operative pneumonia. I have done several deep dissections in the neck painlessly, and have seen large goitres removed. As far as my observation goes there is no operation in the neck which cannot be better done under novocain than ether.

I have on several occasions produced anaesthesia of the arm below the deltoid by the method of Kulenkampff (*Beitrag zur klinischen Chirurgie*, 1912, No. 79, Part 3). This method consists in the insertion of the

needle over the middle of the clavicle, anterior to the subclavian artery, downward and inward into the plexus. When the plexus is reached, the fact is made apparent by tingling and paraesthesia in the fingers. Ten cc. of 2 per cent novocain suprarenin solution are injected into the plexus and anaesthesia should commence in three minutes.

In the chest, resection of the ribs has been published under novocain, and even radical breast amputations, but I have had no personal experience in this matter.

In intra abdominal surgery, I have not been struck by the advantages of this method. I have in several laparotomies been able to open the peritoneum without pain, but have never been able to handle the intestine without general anaesthesia. I am speaking now of non-inflammatory cases. I do not believe local anaesthesia has any province in the surgery of acute inflammation of the abdomen outside of the opening of circumscribed abscesses. Hernia has always been a favorite subject for local anaesthesia. I have done hernias under novocain with good success, even the handling of the cord is painless if novocain be injected into the inguinal canal through the external ring.

Of perineal operations, I have repaired a number of lacerations with success, and have seen several hemorrhoid operations successfully performed. In the leg, outside of local infiltration, may be mentioned the anaesthetizing of the great sciatic nerve, rendering operations below the knee painless.

To sum up, as far as my experience goes, we have in the new technique of local anaesthesia a great and ever widening field of usefulness.

An advertisement in The Journal of the Medical Association of Georgia will bring results. Rates sent on request.

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Advertising forms go to press eight days in advance of the date of issue. In sending in copy time must be allowed for setting up advertisements and for sending proofs. No proprietary medicines can be advertised until approved by the council. Advertising rates will be sent on request.

CONTRIBUTIONS

EXCLUSIVE PUBLICATION: Articles are accepted for publication on condition that they are contributed solely to this journal.

CONTRIBUTIONS TYPEWRITTEN: Authors should have their contributions typewritten—double-space and with ample margin—before submitting them. The expense is small to the author—the satisfaction is great to the editor and printer. We cannot promise to return unused manuscript, but try to do so in every instance. Manuscript should not be rolled or folded.

ILLUSTRATIONS: Half-tones and zinc etchings will be furnished by THE JOURNAL when satisfactory photographs or drawings are supplied by the author. Each illustration, table, etc., should bear the author's name on the back. Photographs should be clear and distinct; drawings should be made in black ink on white paper. While we cannot guarantee to return used photographs and drawings, we use our best endeavors to do so after the article is published, if the word "return" is written on the back of each.

ANONYMOUS CONTRIBUTIONS, whether for publication, for information, or in the way of criticism, are consigned to the wastebasket unread.

NEWS: Our readers are requested to send us items of news of a medical nature, also marked copies of local newspapers containing matters of interest to physicians. We shall be glad to know the name of the sender in every instance.

MEDICAL ASSOCIATION OF GEORGIA.

Sixty-Fifth Annual Session, Held at Atlanta, April 15, 16 and 17, 1914.

House of Delegates. First Session, April 15.

The House of Delegates met at 9:15 a. m. and was called to order by the President, Dr. Ralston Lattimore, of Savannah.

The President stated that the first order of business was the enrollment of delegates by the Secretary.

The Secretary called the roll, and the President announced a quorum was present, and the House was ready to proceed with the transaction of business.

Dr. M. A. Clark, Chairman of the Committee on Scientific Work, presented the following report:

Your Committee on Scientific Work respectfully submit the printed program furnished by the Secretary and recommend that the papers be called in their regular order, and after completing the program for the session, those essayists that may have been absent when their names were called, may be allowed to read their essays, provided that only the remainder of the time of such session be consumed.

If the program for any session is finished before the hour for adjournment, the papers for the next session will be read in their regular order until adjournment.

They also recommend that one hour, beginning promptly at noon Friday, be the hour for the address of the President, who will be allowed to use this hour as he may deem best for the welfare of the Association.

(Signed) M. A. CLARK, Chairman.

It was moved that the report be adopted. Motion seconded and carried.

The President called for the report of the Committee on Public Policy and Legislation.

Dr. Pileher, Chairman of the Committee, said he had not been able to confer with the other members of the Committee, and therefore requested an extension of time, which was granted.

Under the head of Unfinished Business, the Secretary called attention to a change in the fiscal year, which was recommended by the Council last year, but which in accordance with the By-Laws was not submitted to the House of Delegates on two consecutive days, as required; therefore, in order to make the By-Laws conform to the requirement, he asked that the House of Delegates confirm the action of last year.

Dr. T. J. McArthur moved that the House of Delegates approve and adopt the recommendation of the Council of last year.

Motion seconded and carried.

Dr. Roberts, Chairman of the Local Committee on Arrangements, stated the general meeting would be called to order in the main auditorium at 10:30 a. m., when invocation would be delivered by W. R. Hendrieks, D.D., and addresses of welcome would be delivered by the mayor of Atlanta and by Dr. Dunbar Roy, which would be responded to by Dr. Hiers.

Under "New Business," the Secretary

read Section 3, Chapter 1, of the By-Laws relating to the importance of each member entering his name upon the registration book and indicating the component society of which he is a member. No member shall take any part in the proceedings of the annual session unless he has complied with the provisions of this section.

The President stated that he would literally observe that section and no member would be recognized unless he wore a badge.

Dr. M. A. Clark congratulated the Secretary on having published in the April issue of the Journal a correct copy of the Constitution and By-Laws. He commended it to the members of the House of Delegates and also to the general body.

The Secretary said the Constitution and By-Laws as published were up to date, and if any changes were made at this session, they would be embodied in the report to the Journal and as soon as possible thereafter every component society would be provided with a new copy.

On motion, the House of Delegates adjourned until 6 p. m. Thursday.

House of Delegates. Second Session, April 16.

The House of Delegates met at 6 p. m. and was called to order by the President.

Dr. Pilcher read the report of the Committee on Public Policy and Legislation.

Your Committee on Public Policy and Legislation beg leave to submit the following report:

1. We congratulate the profession upon the fact of the passage of the Medical Practice Law by the last legislature, which means that the profession of Georgia, the Empire State of the South, has taken its place among the leaders of an elevated medical profession of the Union. While the bill was not just exactly what your Committee desired, the compromise effected disturbs in no way the material features of the bill and in this connection we would suggest that it is the duty of every doctor in Georgia to heartily support this law, stand loyally behind the State Board of Medical Examiners, and never discontinue their efforts until every quack and charlatan is driven out of the state with their illegal practices.

2. We urge the support of the medical profession of Georgia of the Vital Statistics Bill, a demand for which is imperative, and it is unnecessary in this report for your Committee to go into the details thereof.

3. We would urge upon the profession individually and collectively the importance of medical inspection of school children, reminding you and each of you that through the medical profession alone can this reform so urgent be accomplished, and in this connection we would endorse some such bill as the Ellis Bill, which incorporates the features of this resolution.

4. We commend our fellow member, Dr. Fort, and his associates for their work on eradication of hook worm, and urge the heartiest support of the profession of the state in this very valuable and incalculable work.

5. It is our duty, and your Committee takes pleasure in thus publicly commending the State Board of Examiners in their recent action in carrying out provisions of Medical Practice Law.

Respectfully submitted,

W. W. PILCHER,

Chairman.

L. C. ALLEN,

J. W. PALMER.

At the conclusion of the report, Dr. Pilcher moved that the Hon. Robert C. Ellis be extended the privileges of the floor to explain his bill.

Motion seconded.

Dr. Davis moved to amend that the House of Delegates get through with its regular order of business first, and then Mr. Ellis be heard.

The amendment was seconded, accepted, and the original motion as amended was carried.

It was moved that the report of the Committee on Public Policy and Legislation be adopted, and that the thanks of the Medical Association of Georgia be given to the members of both Houses of the Legislature for the efficient work done in the passage of the bill mentioned.

Motion seconded and carried.

The Secretary read the report of the Council.

Meeting of Council, April 14.

Meeting called to order by Chairman, Dr. Hardman.

All districts represented except Eighth.

Secretary-Treasurer made annual report.

SECRETARY-TREASURER'S REPORT.

In making this, my fourth annual report, the suggestions embodied in my last report to you will again be emphasized.

The membership has increased at the rate of about one hundred annually since my term of office began, but with the corps of trained organizers now in the state I am constrained to believe that our membership will increase at least five hundred during the current year. It is likewise encouraging to note that of all counties that have so far reported, practically all report an increase. This is particularly noticeable in the reports from the smaller societies, while for some unexplainable reason the so-called "big six," representing counties where the larger towns are situated, have reported fewer members than last year. Several new societies have been organized and the interest manifested throughout the state in association affairs is healthy and encouraging. I attribute this primarily to the success attending our efforts in securing the passage of the Medical Practice Act. The profession has begun to realize that by concerted effort we can accomplish something and they are willing and anxious to assist.

I again call attention to the necessity of each Councillor having a list of all the eligible physicians in his district, so that by correspondence he may be able to secure members. This necessity is emphasized by the fact of the organizers reporting that generally speaking the Councillors are ignorant of conditions in their districts. I feel that every man in the state who might join his county society should have at least one letter each year from his Councillor asking him to join.

I again call attention to the fact that the By-Laws are being violated by certain counties carrying on their membership rolls the names of men whose dues to the State Association have not been paid.

It is humiliating to remind you that the proportion of physicians belonging to the state and county organizations in Georgia is lower than in any other state in the Union. I am at a loss to account for this, as we work under the same general plan as all other states and in many respects are more liberal than any other state, but the facts confront us nevertheless.

This condition of affairs caused us to lose several advertisers in our Journal during the past year and materially reduced our income from that source. Feeling that it was necessary to secure members in order that we might be recognized, I have during the past year devoted more time to this than to any

other object and now we are in a position to secure paying advertisements and I have, after conference with the officers of the Association, waged a vigorous campaign with this object in view, since the beginning of the year. I have secured quite a number and am about closing up a contract at this time for space amounting to six hundred dollars, which if secured, together with other prospects in view, will enable us to publish our Journal without expense to the Association, though, as already announced, it will be about 25 per cent larger next year. This should be gratifying to the Association, as the history of other state Journals, accepting desirable advertisements only, even when conditions were easier, as there were only a few Journals at that time, shows that it took at least six years to make them self-sustaining. In order to accomplish this it has been necessary to expend quite a sum of money to get it well established, and necessitates a still further expenditure to make it larger.

This Journal is the property of the Association and is published under your direction. I urge upon you the necessity of speaking a word occasionally in its interest. When possible purchase your supplies from those who patronize you. When a firm sends its representative to solicit your patronage, ask if they give you theirs. Your Journal can never have influence unless you make your influence felt through it.

Again I must ask your assistance in securing the payment of annual dues during the first three months of the year. At the expiration of that period this year only 650 members had paid their dues. Since that time a great many more have paid, and I left over thirty checks in my office when I came away, that came too late to be entered in my final report, and they will continue to come for a month after my return.

In conclusion, I wish to express my thanks for the hearty co-operation, extended me in my work, not only by the officers and Councillors, but by members as well with whom I have often had to take up matters of pressing importance.

INCOME.

Balance from last year.....	\$ 302.77
Loan made by officers.....	1,000.00
Received from members.....	3,372.13
Received from Journal.....	599.09
Total	\$5,273.99

EXPENDITURES.

As per vouchers attached:

No.						
199	A. M. A. Directory.....	\$	6.00	235	Secretary's salary	35.00
200	W. W. Pilcher, President's honorarium	100.00		236	Phoenix Ptg. Co., postage, November	4.01
201	Phoenix Ptg. Co. Paid on old account	250.00		237	Miss Lulu Gay, reporter.....	202.00
202	Secretary's salary	100.00		238	Phoenix Ptg. Co., postage, December	4.12
202	J. E. Taylor, reporter.....	30.00		239	W. C. Lyle, mailing annual reports	2.00
204	Merchants Bank, returned check	3.00		240	Addressograph Co., plates.....	8.95
205	Secretary's salary	50.00		241	Phoenix Ptg. Co., on account..	102.65
206	Merchants Bank, returned check	15.00		242	W. C. Lyle, advance on No. 241	62.65
207	Secretary's salary	25.00		243	J. Lawton Hiers, Councillor's expense	79.23
208	Phoenix Ptg. Co., on account..	600.00		244	Phoenix Ptg. Co., postage, January	4.14
209	Secretary's salary	25.00		245	Phoenix Ptg. Co., on account..	100.65
210	J. E. Taylor, reporting Ass'n, Bal.	40.00		246	Stevens Engraving Co., President's stationery	17.00
211	Phoenix Ptg. Co., postage, April, May	7.55		247	Phoenix Ptg. Co., on account..	152.35
212	Western Union Tel Co.....	3.19		248	W. C. Lyle, stamps membership cards	5.00
213	Postmaster, stamped envelopes	16.62		248	Secretary's salary	50.00
214	Phoenix Ptg. Co., on account..	100.00		250	Augusta Chronicle, postal requests for titles.....	15.00
215	W. C. Lyle, stenographer and postage, Medical Practice Bill	50.00		251	Merchants Bank, interest on Association note	60.00
216	Postmaster, stamped envelopes Medical Practice Bill.....	8.75		252	Secretary's salary	50.00
217	W. C. Lyle, stamps, Medical Practice Bill	8.00		253	Phoenix Ptg. Co., postage, February	4.31
218	Secretary's salary	50.00		254	Underwood Typewriter Co., repairs	2.00
219	Phoenix Ptg. Co., on account..	150.00		255	Phoenix Ptg. Co., on account..	201.35
220	E. T. Coleman, Councillor's expense	29.37		256	Secretary's salary	150.00
221	Merchants Bank, returned check	3.00		257	Postmaster, stamped envelopes	42.72
222	Postmaster, stamped envelopes	21.36		258	W. C. Lyle, stamps for membership cards	6.00
223	Phoenix Ptg. Co., postage, June, July	6.94		259	Western Union Tel. Co.....	1.39
224	Phoenix Ptg. Co., on account..	75.00		260	Phoenix Ptg. Co., postage, March	4.30
225	V. H. Bassett, expenses Program Committee	11.50		261	Phoenix Ptg. Co., postage, April	4.36
226	W. C. Lyle, stamps.....	15.00		262	Merchants Bank, Association note	1,013.33
227	'Phone messages, Medical Practice Bill	8.67			Total	\$4,252.86
228	Phoenix Ptg. Co., postage, August	3.13			April 11, 1914. Balance on hand ..	\$1,021.13
229	Western Union, Medical Practice Bill	16.73			Bills payable	\$1,225.50
230	Phoenix Ptg. Co., postage, September	3.37			Bal. Secretary's salary.....	1,265.00
231	I. H. Goss, Councillor's expenses	26.30			Total	\$2,490.50
232	Phoenix Ptg. Co., postage, October	3.87			Bills receivable—	
					Journal past due accounts	\$ 922.89

Contracts for ensuing year (less com.).....	1,606.50	2,529.39
		<hr/>
		\$3,550.52

The Chairman appointed the following Committee to audit the report of the Secretary-Treasurer: For the Council, Drs. W. L. Champion, E. T. Coleman and J. R. Branch.

Upon motion the meeting adjourned.

W. C. LYLE, Secretary.

Meeting of Council, April 16.

Meeting called to order by Chairman, Dr. Hardman.

All districts represented.

The Committee appointed to audit the report of the Secretary-Treasurer reported as follows:

Atlanta, Ga., April 15, 1914.

To the Board of Councillors of the Medical Association of Georgia:

We, your Committee appointed to audit books of the Secretary-Treasurer of the Medical Association of Georgia, beg to submit the following: After carefully examining the report of said Secretary-Treasurer we find the same to be correct. We further beg permission to congratulate our very worthy and ever vigilant Secretary-Treasurer on the splendid and accurate work done by him in the interest of our Association during the past year.

Respectfully submitted,

W. L. CHAMPION,

Chairman.

E. T. COLEMAN,

J. R. B. BRANCH,

Committee.

Upon motion the report of the Committee was accepted as the audit of the Council.

Upon motion the reports of the various Councillors were ordered published in the Journal of the Association.

Being no further business, the meeting adjourned.

W. C. LYLE, Secretary.

Dr. Davis moved that the report be accepted.

Motion seconded and carried.

The Secretary read the minutes of the Council to the House of Delegates and stated that hereafter reports of the Councillors would be published in the Journal so that members could become familiar with what was being done by the Councilors in their respective districts.

It was moved that the minutes be adopted as read.

Motion seconded and carried.

Dr. McArthur stated that inasmuch as the Committee on Public Policy and Legislation in its report commended the work of the state officials and members of the legislature, it occurred to him that it would not be out of order to publish that resolution of commendation in the public press. Accordingly he made a motion to that effect, which was seconded and carried.

Dr. Charlton brought up the matter of electing delegates to the House of Delegates of the American Medical Association for a longer term than two years, so that they could familiarize themselves with the business matters brought before that body. He pointed out the advantages and the great importance of extending the term of delegates to at least six years, and suggested that if feasible their transportation expenses be paid out of the funds of the Association.

Dr. Pilcher concurred in the suggestion of Dr. Charlton and said he thought it would necessitate a change in the Constitution or By-Laws.

After considerable discussion as to whether it was necessary to amend the Constitution or By-Laws relating to this matter, the Secretary stated there was nothing in the By-Laws concerning it, but that it was a constitutional provision, and that if an amendment to the Constitution was offered it would have to lie over until next year before action could be taken on it.

After further discussion, which was participated in by Drs. Pilcher, Charlton, McArthur, Branch, Allen, Hiers, and others, Dr. Allen moved that inasmuch as it was a constitutional provision the whole matter be laid upon the table indefinitely.

This motion was seconded by several.

The Chair put the motion, and as there was some doubt, a rising vote was called for, with the result that eight favored tabling the matter, while seventeen were opposed to it.

The Chair thereupon declared the motion to table lost.

Dr. Pilcher then moved that the House of Delegates appropriate the sum of \$100.00 for each delegate.

Motion seconded and carried.

Mr. Ellis then addressed the House, pointing out the essential features of his bill, and urged the members to support the measure.

Dr. Davis moved that all matter pertain-

ing to the bill be referred to the Committee on Public Policy and Legislation.

Motion seconded and carried.

Dr. Hiers moved that a vote of thanks be extended to Colonel Ellis for addressing the House.

Motion seconded and carried.

On motion the House of Delegates then adjourned.

Adopted by the business session of the Association, April 17, 1914, on motion of Dr. Pileher.

AN ECHO.

Gathered around a table in the Capital City Club in Atlanta, during the recent convention of the Medical Association of Georgia, were five or six doctors—all of them members of the Association for a decade or more. One was a man distinguished in his profession, who has devoted his life almost entirely to research work. Another, one who has always been a great exponent of organization; another a member of the legislature and prominent in the political life of the State. The rest just plain doctors.

And there arose a discussion among them which was never quite terminated, the crux of which was this: "For what does the Medical Association of Georgia honor its members by elevation to the presidency, or other offices within its gift?" And the scientist maintained that the only thing which should entitle a man to the presidency of this great Association was high scientific achievement, and the organizer maintained that he who has made two County Societies grow where only one existed before, has done a work which is worthy of recognition. And yet another maintained that it was quite within the province of the Society to pay its highest tribute to a man on the ground of sheer personality, if it so chose to do, and one of the plain doctors in this little group sat by and listened to it all and contributed no word to the discussion, but beneath his calvarium there arose a thought which he carried away with him, and which has grown until it is strong enough for utterance. The thought was this: That none of these men, brilliant as they were, devoted as they were to their profession and their organization, had ever quite grasped, in all of its fullness and import, Article 2 of the Constitution and

By-Laws of the Medical Association of Georgia, which reads as follows:

ARTICLE II.

PURPOSES OF THE ASSOCIATION.

"The purpose of this Association shall be to federate and bring into one compact organization the entire medical profession of the State of Georgia; to elevate medical knowledge and advance medical science; to elevate the standard of medical education and to secure the enactment and enforcement of just medical laws; to promote friendly intercourse among physicians; to guard and foster the material interests of its members and to protect them against imposition; and to enlighten and direct public opinion in regard to the great problems of state medicine, so that the profession shall become more capable and honorable within itself and more useful to the public in the prevention and cure of disease and in prolonging and adding comfort to life."

A comprehensive purpose this, and one which calls urgently for the exercise of all the brain and zeal which the members of this Association can bring to it. It seems to the plain doctor idle to attempt to differentiate between the value of the laborers when each has his own specific part of the work to do. No one of them is big enough, no one of them is many-sided enough to attempt within his own personality to body forth all of the aims and purposes of this great organization; but every one, according to his own peculiar fitness, can and should do his share in this great work, whether as publicist, research worker, organizer or practitioner, and should rest assured that no part of the labor involved is unworthy. There is certainly work enough—and there ought to be glory enough for us all.

More diagnostic mistakes are made from not being thorough than from not knowing. Every patient who consults a physician with the idea of paying him for his services, or even those who are too poor to pay, is entitled to a thorough examination. Careless examinations and immature conclusions by rapid-fire physicians consume time that in many instances is so dangerous as to permit what was a curable condition at the date of consultation to advance into a dangerous and even incurable stage.—Pittsburgh Medical Journal.

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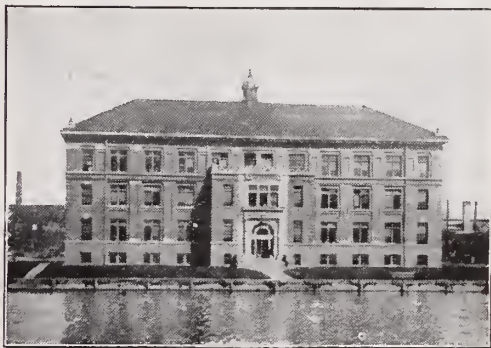
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PRESIDENT'S ADDRESS.

Ralston Lattimore, M.D., Savannah, Ga.

Twelve months ago, when I was honored by being chosen the official head of the Medical Association of Georgia, I was at once profoundly impressed with the responsibility of your confidence, so liberally and cordially expressed. In a few words of acceptance I promised I would do, not my best, but my very best for the Association and every individual member, to try to show my gratitude and appreciation.

From a year's experience and personal observation, I realize now more fully than ever, that to be at the head of this grand old Medical Association of Georgia is a great honor, which makes every normal man thrill with pride, but at the same time has its responsibilities, and the president must constantly bear them in mind. A great deal of his time and energy, literally speaking, must necessarily be used, unstintingly, pro bono publico.

If the president were an all-time man, and not more or less during his stewardship engaged in the practice of medicine, he could attend the district meetings all over the state, and all of the County Society meetings,

and devote his spare time, if any, to the constant work of organization. Unfortunately, this is not so. I saw this at the beginning of my term of office. I wrote to the Vice-Presidents, Dr. J. D. Chasen and Dr. Stewart R. Roberts, asking help in their parts of the state.

There are some parts of the state I have not visited, very much to my regret, though in interest of the Association I have been away from Savannah eighteen times, and the surface has only been scratched. Organization is the keynote to effectual work, without which, in my judgment, good work is impossible.

The Medical Practice Bill is so fresh in our memory that nearly every member of the Association remains covered with the "dust of battle." The passage of the bill did much, in my opinion, to bring the members of the Association together for a common good. The response to the call all over the state was prompt, loyal and spontaneous. The members of the Association made many great personal sacrifices in the way of time, expense and effort.

Members of District and County Societies took up the slogan of Better Doctors, Better Medical Colleges, Better Hospitals and Better Medical Laws for Georgia; they put

the slug-horn to their lips, blew the challenge and plunged into battle.

Some of us got so interested in the fight that I fear we forgot our patients and our duties at home. Every time a conference was called, the response was immediate.

During the actual battle at Atlanta before the Rules Committee, the Senate and the House of Representatives, this well organized machine, the Medical Association of Georgia, worked like a dynamo.

I am glad of the opportunity to formally express to the members of the Association my personal thanks for the wonderful, hard and effectual work.

Your Committee on Public Policy and Legislation is composed of men who never fail in anything. Our ex-President, Dr. W. Wyman Pilcher, Dr. J. Will Palmer, Dr. Allen and Dr. Wheelchel.

Dr. Pilcher, in his lovable, wholesome way, kept us moving; he was constantly saying, "Let's go." Dr. Palmer looked after many details and kept us in touch with them as only Dr. Palmer knows how. Dr. Allen looked after our interest in the Assembly and Dr. Richardson in the Senate, and Dr. Wheelchel, Chairman of the Sub-Committee, was always active and painstaking.

The Councilors met with us and their Chairman, Dr. W. B. Hardman, was there with his helpful advice and willing hand, also Dr. Nolan, always ready and smiling.

Dr. Willis F. Westmoreland was a veritable encyclopedia of information. He had his work so systematized that every member of the House and Senate was polled, marked and indexed; his work was thorough and most helpful.

Dr. Cunningham of Macon came to Atlanta at once in response to a telephone message and helped turn the tide in the Senate in our favor. I must not forget to mention Dr. J. Lawton Hiers, Dr. R. L. Miller, Dr. J. R. Stathan, Dr. McRae, and others.

It gives me great pleasure to express cordial thanks to Hon. Herman C. Shuptrine, who worked day and night for the bill, and also to Hon. J. Randolph Anderson, who gave us for two years great aid and never failed to respond to a call for assistance; finally, when the bill was brought up before the Senate, he came down from the president's chair and made a convincing speech, which I know influenced many votes in the Senate and helped to create an atmosphere of approval in the House of Representatives.

Standing like the Rock of Gibraltar was our Secretary and Treasurer, Dr. Wm. C. Lyle, a tower of strength, energy and enterprise, and a most valuable man always to our Association.

In fact, timely help came from every City, County and District Society all over the state. I have never seen better and more effectual work, and it was certainly required. The County and District Societies are well organized; the members are enthusiastic and enjoy their work, and above all, the fellowship established.

I am fully convinced that every physician practicing in Georgia, to enjoy the consultation and fellowship of his professional brothers, should be a member of his County Society and of the State Association. It means better service to his patients and a co-operative professional spirit throughout the state.

Our Secretary, Dr. Lyle, tells me that the membership of the Association is larger than ever before in its history, and that the financial condition is good.

I have purposely saved for the last that which I consider the greatest present need of Georgia from a professional viewpoint—the Registration of Vital Statistics.

The Medical Practice Bill brought Georgia to the front and gives to our Empire State a high standing throughout the United States, bringing reciprocity with many states, which Dr. Nolan will tell us about.

But, fellow members of the Medical Association of Georgia, we are way down on the list regarding the registration of vital statistics. In fact, we have no standing. Georgia is one of 33 per cent of the states without vital statistics. We are justly proud of our professional reputation and health condition of Georgia, but we have not state statistics recorded anywhere. Why we have overlooked this condition so long I do not know, unless we were waiting to first pass our Medical Practice Bill. Especially is it of widespread interest in Georgia, because vague rumors of high mortality can only be refuted by accurate registration of births and deaths.

There is no Vital Statistics Law in Georgia. In a state without a Vital Statistic Law a suit came up over some property; the age of one of the heirs became a question of prime importance. None of the witnesses could be exact; all remembered the approximate year, but all were unable to fix the time beyond question. There was no public record of

birth that might have been consulted. It seemed as if the heir would lose his right, merely because he could not establish his exact age. Then some one remembered that a thoroughbred cow on the farm had given birth to a calf on the day the heir was born. Other witnesses corroborated this. The calf was valuable; its birth had been registered, and by the books of the Breeders' Association, the man was able to prove his own age.

It is a sorry commentary on the state of Georgia that we should have no registration of births and deaths. All northern and western states, in fact all of the states that are growing rapidly and are proud of their health condition, have a Vital Statistics Law, with records for easy reference.

The Southern states, so long neglected, are rapidly coming into line; recently Missouri, Kentucky, Mississippi, Arkansas, Tennessee, North Carolina, Virginia and South Carolina have adopted and are using the Model Law, complete or in part. This law for the registration of vital statistics is simple, practical and inexpensive, the head officer or registrar being the Secretary of the Board of Health.

Practically all progress made in this country during the past decade in the extension of the registration laws, is due to the Model Law. This law is based upon principles of successful registration as worked out by officials of the Public Health Association, with the aid of the Bureau of Census. It has lately been revised by a committee representing the American Medical Association, American Bar Association, Conference of the Commissioners on Uniform State Laws, the Children's Bureau, and the Bureau of Census.

Resolutions have been passed by many of the County and District Societies endorsing the Model Law, for the registration of vital statistics.

A resolution by Dr. Stewart R. Roberts was introduced and adopted by the House of Delegates of the Medical Association of Georgia at our last meeting in Savannah, that the Medical Association of Georgia call the attention of the State Legislature to the lack of a Vital Statistics Law, and the great need for such a law, in order that a register of different diseases, births and deaths may be had, in keeping with the custom of forty-five other states.

I also commend a Public Health Bill for Georgia, by our friend, Mr. Robert C. Ellis

of Tift. This bill has been recommended by House Committee of Hygiene and Sanitation that "it do pass." This is a bill to prevent sickness and death from preventive diseases; also to improve and control the health conditions in every county in the state.

I hope the Association will endorse both these bills, and during the coming session of legislature, the Model Law for the Registration of Vital Statistics, and the Public Health Bill, will be passed, and at once become operative.

I thank you, gentlemen, collectively and individually for your cordial and hearty cooperation during my term as president. It has given me the esteemed pleasure of knowing better and appreciating more than ever my co-workers and professional brothers in the Medical Association of Georgia.

SOME WORK FOR GEORGIA DOCTORS.*

L. C. Allen, M.D., Hoschton, Ga.

"Heaven doth us as we with torches do—
Not light us for ourselves alone."

The Apostle Paul said of the people of Athens that they spent their time hearing and telling some **new things**. But we should remember that the Athenians were a wonderfully brilliant people, and at the time St. Paul made his famous observation the people of Athens were giving the light of knowledge to a darkened world.

The modern physician emulates the Athenian of old in learning and telling some new things in medicine. With our numerous laboratories, foundations, hospitals, institutes and our army of trained physicians and scientists everywhere on the alert for some new discovery, a vast amount of new knowledge is being accumulated. New facts, new light, new remedies, new methods come so fast these days that it is with difficulty that one keeps up with the latest discoveries in medicine and surgery. True, much that has been published has proved to be useless, but out of the mass of investigations a very large amount of new knowledge, which is of the highest importance to the human race, has been revealed within the last two or three decades. Now, this valuable knowledge is limited, at present, to a comparatively few people—the medical profession alone, with a

*Read at meeting of Medical Association of Georgia, Atlanta, Ga., 1914.

few of the laity, being possessed of this knowledge. Sanitary science, knowledge of the causation and the prevention of disease, as we know it today, is still not understood by the great mass of mankind. The people are entitled to this knowledge. Our problem is to disseminate this knowledge among the people at large. That is "the work that we should do." But let us clearly understand the problem. I do not believe it to be our duty to undertake to teach the public all of medicine and surgery. Such a suggestion would be absurd. It is certainly not our business to instruct our patients in anatomy, chemistry, physiology, pathology, or therapeutics. Indeed, I believe it is better for the average man not to try to learn therapeutics, for truly here "little knowledge is a dangerous thing." I believe that only the educated and thoroughly competent physician should ever undertake to treat the sick. Human life is too precious to be tampered with by those who know not what they do. I think that the layman who tries to be a physician is very foolish. We should not encourage them in this unwise practice, fraught, as it often is, with ruinous consequences. But there is a vast amount of knowledge that we may safely and wisely impart to our patients and the public, for the physician should be both a private tutor and a public instructor. I believe it is not only a privilege, but a duty we owe to society to teach the people all we know concerning the causation and prevention of disease. In my opinion there is no department of human knowledge whatsoever in which the people stand in greater need of instruction than preventive medicine—knowledge which will enable them to keep well and healthy, make each member of society an efficient worker and physically able to stay constantly on his job. The medical profession alone is able to disseminate this knowledge.

Fully half the sickness we have is preventable sickness, and more than half the deaths avoidable. It is in our power to prevent an enormous amount of suffering. We spoke above of the highly civilized people of Athens in the time of St. Paul. It is painful to contemplate the fact that this civilization went to decay when the bodily health, mental strength and moral sense were depraved by the insidious and invisible germs of malaria which were brought from Africa a few years later. Because the Greek had no knowledge of quinine or mosquito the malaria plasmo-

dium soon made havoc of that once splendid civilization.

There is much malaria in Georgia. Thousands of our children are having their vitality sapped by the hookworm. Because of the presence of easily curable physical defects, the mouth-breathing, staring dunce is a common object in all our schools. There are entirely too many pale, weakly, languid boys and girls in Georgia. No state whose people are sickly and inefficient can hope to become a great commonwealth.

"Ill fares the land to hastening ills a prey,
Where wealth accumulates, and **men** decay."

By teaching the people a few simple facts the amount of good the medical profession may accomplish staggers the imagination. A few things that we should teach I will mention: The people should be taught the manner in which tuberculosis spreads from the sick to the well, and the approved methods of preventing the same. They should be made to know that typhoid fever is an infectious disease, and should be instructed in methods of disinfection and cleanliness, and informed of the benefits of typhoid vaccination. They should be taught how the mosquito spreads malaria, and instructed in methods of prevention. The great amount of evil the hookworm disease is doing the people of our state should be kept before the public, and the importance of prompt treatment impressed upon them. The people should be told of sanitary privies, and that house flies are as great a danger as mad dogs. The young people and parents should be instructed concerning the two twin enemies of the human race, gonorrhoea and syphilis. These are a few of the many things that we should teach. Others will suggest themselves to you. Don't tell them what is "good for" this thing or that, and have them drugging themselves ignorantly and injuriously, but tell them that disease, for the most part, is under man's control. Tell them that disease is caused from dirt, germs, alcohol, bad habits, and bad morals. Tell them that cleanliness, temperance in all things, upright conduct, good health and long life go together. Who shall have a sound body and good health, or who shall have length of days and honors heaped upon him? He that hath clean hands and a clean home, a good cook and a pure heart, and who hath not worshipped at the shrine of Venus, nor bowed down at the altar of Bacchus. He shall re-

ceive the blessings of health and longevity from Hygeia, the goddess of his salvation, and his eugenic babies shall thrive, and grow strong and handsome, and bless the earth.

King Arthur, a legendary ruler of Britain, was famous for his circle of brave and high-minded knights, whom he bound by an oath to spend their lives in deeds of virtue and chivalry. The Medical Association of Georgia is likewise a band of humanitarians, whose lives, for the most part, are spent in unselfish service for humanity. The final test of the value of any man to the world in which he lived is the amount of good work he does for the human race, during his active period of life. Your value to society is not measured by what you get out of it. The world places a false standard upon humanity when it measures a man by dollars and cents. Any man, any profession, any church, any school, any social force, is valued by what it contributes toward making cleaner, purer, nobler, healthier, **stronger** men and women. When the critical test of our usefulness here shall be forthcoming, as it is said it shall be, before the Great Judgment, the man who was worth a hundred million here will stand on precisely the same basis as the man who was worth thirty cents when he died, and whose widow had to use his insurance money with which to pay his funeral expenses and his doctor's bill. The **one portentous** question then will be: **What has the man done?** The amount of money a man leaves in the world is not what counts. It is the amount of useful work he has accomplished. I know of no calling whatsoever that offers, at the present time, greater opportunities to good work for humanity than that of medicine. We who are physicians have been equipped for service. Let us make the most of our equipment and our opportunities.

I am not one of those who believe that a physician's activities should be limited to the treatment of the sick. We are citizens and men as well as physicians, and no person should lose interest in matters which affect the common weal because he undertakes **any** particular line of work. No good citizen should deny himself the privilege, nor shirk the duty of serving his fellow man, or working for the public good, in any important capacity for which he is especially qualified. I believe that the members of this Association, because of their training and their broad experience among all classes of our people, are peculiarly qualified for leader-

ship in all civic and social undertakings which have as their object the improvement of the health and the morals of the inhabitants of this state, and to bring about better living conditions in this great Commonwealth. **To make the people of Georgia the healthiest and the strongest of all the people in the United States** should be our aim. Then, indeed, will Georgia be the Empire State of the Union.

Gladstone, the great English statesman, used these remarkable words: "**Physicians will be the future leaders of the nations.**" And Chauncey Depew said: "**The professional man, because of his wider culture and more accurate training, is a leader in every community.**" And a man whom we all delight to honor, that "grand old man" in medicine, Dr. Abram Jacobi, in a public address, recently made use of the following language: "**If there be in any community any man or class of men with great possibilities and responsibilities, it is the physician. It is not enough, however,**" he continues, "**to work at the individual bedside and in the hospital. In the near or dim future the physician is to set in and control school boards, health departments, and legislatures.**" I could cite many other equally weighty opinions, but deem the foregoing sufficient for this occasion.

If we are to have large success in our campaign for the prevention of disease, and in our efforts to educate the people in sanitary matters, we must co-operate with all workers in fields of social betterment. If the State of Georgia is to be made more sanitary, and living conditions here more salubrious, it is absolutely necessary that much of the work be done by the State government. I beg to call your attention to a few matters which I think should receive your attention. In the first place we need a Vital Statistics law. A bill for this purpose was introduced at the last session of the legislature, received favorable committee report, and should come up for action during the early part of the session this summer. There is some opposition to this bill, and if it passes the friends of health and sanitation must be active in its support. Vital statistics is the backbone of any system of health laws. Georgia now has the unenviable distinction of being the only state in the Union without some kind of vital statistic law.

Another bill that should have our support is the Public Health Bill, as introduced in

the legislature last summer. This bill has also received favorable report from the Committee on Hygiene and Sanitation, and should come up for final disposition at the next session. This bill was introduced by Mr. Ellis, of Tift; is very broad in its provisions, and is intended to supplant our present inadequate and antiquated health laws. We want to bring about the medical inspection of all the schools of our state at as early a date as practicable. The Ellis bill provides for this, but leaves this provision optional with the authorities in each county, which provision with our present state of public knowledge regarding medical inspection, is a wise one.

The Tuberculosis Sanitarium at Alto needs a more liberal support. This deserving state institution is doing excellent work with the limited means at its command. It should be enlarged at an early date, that it may care for more of those unfortunate invalids who carry home with them to every community in the state the knowledge of the benefits of fresh air, and the methods of preventing the spread of consumption.

An effort was made at the last session of the legislature to enact a law which would insure that all foods prepared and offered for sale in this state shall be prepared and kept under sanitary conditions, screened from flies, and kept clean, and that no person afflicted with any infectious or contagious disease be allowed to work in any such establishment, or handle food products. A good many objections were offered to this excellent bill by interested parties. The bill was badly amended and finally postponed. For the lack of a proper sanitary law the average market, grocery store, bake shop, candy-making places, restaurants, hotel kitchens, and food producing and distributing places in this state are not receiving proper attention. State Food Inspector Methvin tells me that many such places are very filthy indeed.

In the campaign which we must make for the elimination of preventable disease in our state, we must use as weapons the knowledge which scientific discovery has given us. The material prosperity of our state has not been retarded near so much by bad tariff and currency legislation as it has been hampered by preventable sickness and physical inefficiency among our people. Much is heard these days about "conservation." You who are members of the medical profession, in your efforts to conserve the health of our people, are rendering your state a patriotic

service. You are doing a great work for Georgia, for the greatest asset of any state is the health of its people.

If there be those who would object to this kind of work by physicians because such work lessens our business and therefore our income, I have only to say that the motive is not a worthy one. If there be objection because such work is somewhat public in character, I beg to ask, who beside physicians are capable of doing this kind of work? But those who would put the brakes on this movement are destined to inevitable failure. Immunology is in its infancy. Preventive medicine has just started. Those who cry against it shout into the wind. The principle cannot be successfully assailed. The interest of all humanity is at stake. And it cannot be disputed that in all questions of human welfare, happiness or health, he who contends for the interests of the individual or class, as against the mass of humanity, is sure to be overwhelmed in defeat.

DISCUSSION ON DR. ALLEN'S PAPER.

Dr. C. H. Richardson, Montezuma: I heartily concur in everything Dr. Allen has stated in his paper. I believe the future treatment will be preventive and serum treatment. As we have antitoxin for diphtheria and antitetanic serum for tetanus, and antityphoid vaccine for the prevention of typhoid fever, etc., I feel the future of medicine will be a serum for almost every specific disease. I believe the State of Georgia should pass a universal law for the medical inspection of her public school children. The principal cities of our State have such a law in existence. Such a law is needed more in our rural section than anywhere else. Georgia should have a universal law requiring all children to be inspected, to see whether they are suffering with adenoids, enlarged tonsils, defects of the eyes, etc., and all skin troubles. All these things prevent the development of the body, and some are highly contagious and are liable to break up the school or the community.

I think also that Georgia should pass a Vital Statistics Bill. I wrote to the Secretary of the State Board of Health a few days ago requesting him to prepare a bill of that kind, and I would introduce it in the Georgia Senate and see if we could not pass it. Georgia needs such a bill. We should have a Public Health Bill, and also a Vital

Statistics Bill. In certain parts of the state we have people coming in, as for instance, northern Georgia, from South Carolina and from Tennessee, and they want to know what are the prevailing diseases in our section, and the death rate. It is necessary to know the birth rate as well, and how under the sun can we tell them anything about it unless we have a Vital Statistics Bill upon the statute books of Georgia. We need it, and we need it badly.

The doctor mentioned a tuberculosis sanitarium, and being connected with it I am in a position to know that it is doing noble work. On the day when the appropriation for that bill came up in the Senate it was said that Georgia was poor and could not afford to appropriate the money for that purpose, and the bill went back to the House. These things we sadly need in the State of Georgia, and we have not got enough money to appropriate the necessary amount for them. But we are doing a noble work in the State tuberculosis sanitarium, and I hope the appropriation this year will be increased. I want to repeat, that I concur in everything that Dr. Allen has said.

Dr. M. A. Clark, Macon: In the same good book from which the essayist has quoted, we read, "The sower went out to sow." Some seed falls by the wayside, some in stony places, and some in fertile soil, and we know the results.

The great trouble, gentlemen, in educating the people is, most people are by the wayside and in stony places. The poor people do not want to be educated, and that is where the difficulty comes in the medical profession in preaching preventive medicine. Understand me, I do not discourage preventive medicine, for I continue to preach it. We must continue to preach it. For fifty years it has been contended that teething does not make babies sick. At the present day mothers say babies do not get sick while they are teething. It has taken fifty years to convert people to the fact that teething does hurt babies. Let us persist in our teaching preventive medicine. There is one thing that may help us in teaching preventive medicine, and that is by practicing it a little more ourselves. We talk to mothers and to people generally about the evil of spitting; we tell them about the danger of it, but if they were to follow us around in our meetings they would behold how well

we practice it. We should point out to them how careful they must be in handling a tubercular patient, how careful they must be in handling the soiled linen, and point out to them the importance of this infection.

How many of us provide ourselves with the proper measures or adopt precautions for protecting ourselves in washing our hands with soap and water before leaving the house. We in our busy cares, or in every day life are in such a big hurry that we overlook these little things, and I wish to remark just here that in addition to what has been said by the author of the paper, these little things, if observed by us, will add much to the gospel we are preaching from time to time and will encourage the people to become more educated with reference to preventive medicine than much of the preaching we may do. Let us practice what we preach, or by example show them we mean what we say when we tell them certain things will prevent, and that by certain methods we may stamp out disease. If that is done, the people will be ever ready to co-operate with us in getting an appropriation for proper preventive treatment.

Dr. J. D. Chason, Baimbridge: I was much interested in Dr. Allen's paper. I think it is an excellent one, and reminds us of one fact. "Does a knowledge of evil prevent a crime?" If so, why is it that some of the members of our profession take morphin? Why is it that some of them take whiskey intemperately?

I believe the whole country is awake to the idea of sanitation. The mothers' clubs in our small cities everywhere are asking for co-operation on the part of physicians in teaching them sanitary methods. It is being taught, yet when we speak of tuberculosis and diphtheria, etc., we find the people are becoming educated along that line, and especially so are they with reference to typhoid fever. When we come to the question of venereal diseases, it is a hard proposition, and one that has not yet been solved. And when it will be solved I do not know, until we pass a eugenics law, and I think then the venereal proposition will be solved, and not until then.

We need a sanitary law for Georgia, and that law should be enforced. You cannot get a law enforced unless you have sanitary officers to pass a drastic law. It cannot be enforced by the medical profession at large;

they can only assist the sanitary officer in the community.

Last night we heard one of our representatives speak of the bill that was introduced by Colonel Ellis. This bill will not pass the Georgia legislature in my judgment, for the reason that he asked for a sanitary officer in every county or in a combination of counties with a population of 50,000 people. That bill will not pass for the reason that at the present time the State is in debt to the extent of twelve millions of dollars, a floating debt, with bonds coming due, and with the clamor against high taxation and appropriations for many things, I do not believe the people will stand for it. If the bill called for one sanitary officer for every congressional district it would be more effectual, and it would be a great help to the physicians in Georgia. There is no doubt about the importance of enacting or passing such a bill. The number might be increased later. I think it is essential that such an officer visit our schools and give advice to the community, give lectures and do a great deal of other work. The measure could not be made thorough to begin with, but like every other good measure it has to be started, built up and cultivated, so that the people will learn the benefits of it, and then they will become more liberal along these lines.

I believe that a campaign of education of the public in a sanitary way or in the way of preventive medicine has been carried along these lines for a number of years. Everybody is of one accord in that direction except a certain class of people who are not educated, but who need to be, and will not be for years and years. We have our worst troubles in small towns over the country where the negro population is largely in excess of the white. You might just as well try to teach sanitation to mules. We have a class of people you cannot educate along sanitary lines. They have cases of smallpox and scarlet fever in their families, and they are never reported. They have deaths and sickness, and you know nothing about it until you see the funeral procession, and it is going to be hard to stop these things. If it were the white population instead of the colored population of the State, we would find that preventive medicine would be much easier than it is going to be in trying to educate the colored people. However, the work ought to proceed, and I heartily endorse the paper.

Dr. T. J. McArthur, Cordele: I think we are indebted to Dr. Allen for presenting this subject to us in such an able manner. We all admit that it is an interesting subject, not only from the standpoint of medical men, but from the public as well. I think we cannot preach preventive medicine too much. I believe that one of the greatest responsibilities resting upon our profession today is to teach preventive medicine, and in order for us to teach it we should be tactful and attempt to do it in that way which will accomplish the most.

The essayist in his remarks spoke of the criticism that is sometimes given to medical men who engage in this work of teaching preventive medicine. I believe that that can be largely overcome by being tactful, and I make the statement now, which I have repeatedly made, that the local medical society should assume the responsibility of teaching preventive medicine in the community, and in that way we will have the individual members relieved of embarrassment who engage in this work.

I think a very excellent plan would be to have every local medical society to appoint a committee to take this work in charge and let the responsibility of teaching preventive medicine in that community rest upon the medical society and its committee appointed for this work. If that is done, and if this committee would prepare papers or select extracts and furnish the press with this matter, they would find the newspapers throughout the country would be willing to cooperate with us in this work. The names of the committee need not appear in the newspaper; it can simply be stated that this matter is furnished by the committee from the local medical society, and in that way the entire society and the medical profession will get credit for this publicity work, and no individual member of the profession.

It is very gratifying to note that the press throughout the State is already taking great interest in this work. The press in this city and the weekly papers throughout are doing a great deal of good along this line, and I think that if we as medical men and as medical societies would avail ourselves of this opportunity of using the press and furnishing the press with matter in this way, a great deal of good can be accomplished, and we will very much sooner get the needed legislation than by not using the press.

Dr. A. J. Mooney, Statesboro: I am thoroughly in accord with everything the essayist has said, as well as the remarks made by Dr. McArthur, and I want to say this, that through the efforts of the Bulloch County Medical Society and the Board of County School Commissioners of Bulloch County the very thing the doctor mentioned is being carried out. They are working in harmony with the council of the Bulloch County Medical Society at the invitation of the County School Commissioners, and are going to continue to send men to visit every rural school in Bulloch County with the idea of teaching them the fundamental principles of hygiene and sanitation, the prevention of the common diseases, like hookworm, typhoid fever, etc.

As for the vital statistics bill, the time is coming when it will be a law in Georgia, and we all must look forward with great anticipation to that time.

Dr. A. L. R. Avant, Savannah: I do not think that anything will occur during this meeting that will be of more vital importance to the people of Georgia than the subject now under discussion. It occurs to me that the medical profession has been for many years dilatory in arriving at some of the most important functions that it should perform, and one of them is knowledge that we should impart to the people with whom we live in regard to sanitation and how to take care of themselves. We have lived too much to and for ourselves. I am delighted to know that the grand county of Bulloch, so far as I know, and I did not know that until now, has undertaken that very important and wise movement, to begin to tell the people something about themselves. We are not impressed with the idea of how little the people know of themselves, and it is up to the medical men to teach the people what they are and what they should and could be. We come to these meetings and we hear discussed papers read upon the simplest subjects pertaining to the medical man, the simplest diseases, and things that we should know and be familiar with before we come out of college. We should hear more of such things which the essayist has brought before us today, and we should take a more prominent stand in the affairs of the things that surround us. We are too exclusive. We are too selfish and keep our knowledge and our work and information too close in our rank.

I want the members of my profession to wake up to this important fact, and I hope that as the years and years go by we will hear more of such papers as this discussed in our meetings.

Dr. Allen, in Closing: Dr. Clark's remarks remind me a little of an experience that I had last year. I have a very good friend who lives several miles from our town, who is quite a prominent man in the community where he lives. He owns a good deal of land and is considered one of the leading citizens in that section of the country. He is a good friend of mine, and he got me to come up there to his church one Sunday at a large gathering they had to give a talk on health topics. I complied with the request and did the best I could, speaking of the measures in the prevention of disease. He was talking with another friend of mine some days later, and the other friend told me what he said. He said, "Dr. Allen is a smart man; he is a good man, one of the best posted men in this country, but these people do not believe what he says. I do not believe half of it myself." But still, that does not discourage me. We should remember that the medical profession has been about twenty-five hundred years learning these things. It has only been twenty or thirty years since we knew what caused tuberculosis and other diseases, and I think we are making rapid progress in educating the people and considering the length of time we ourselves took to learn the germ theory, the real cause of disease, we should not be discouraged because people do not get educated over night. We have got to keep working, persisting in the good work, as long as we live, and when we die, leave our sons in the harness to carry on the work, and we will finally triumph in this matter.

In regard to the Ellis Bill, a bill that creates a County Health Board in each county, the matter of putting a health officer on full time is left optional with the authorities in each county. There should be no opposition to the Health Bill of Mr. Ellis, or rather the substitute bill. The original bill made it mandatory, but the substitute leaves it optional, and I cannot see how anybody should object to that.

I want to say that those of you who favor the vital statistics bill ought to take a little interest in that matter and help us to pass the bill. There is some opposition to it, and unless someone takes an interest in it it may be deferred.

OBSERVATION ON THE SURGICAL TREATMENT OF GOITER.*

Dr. Edward G. Jones, Atlanta, Ga.

The attitude of the profession toward goiter ten to twenty years ago, and the impression induced on the public mind by this attitude, reflect themselves today as follows:

(1) Many physicians look upon goiter as incurable except by some unexplainable, occasional and non-uniform influence—and consequently do nothing positive about it.

(2) The public generally look upon goiter as incurable and consequently do not even consult a physician about it, until late.

The present decade has shed such light upon the pathology and treatment of goiter that, while there are many things we must yet know, and while exophthalmic goiter is still a malady attended by a high ultimate mortality under any sort of treatment, there is no need whatever for the average person with a goiter to be consigned with a sob of sympathy to death, or even to chronic invalidism—provided prompt action be taken by the attending physician.

Whether one agrees or not that the proper treatment for goiter is surgical, he must admit that our present progress toward a solution of some of the problems connected with goiter is due in a very predominant degree to surgical endeavor.

That medical treatment apparently, or temporarily, cures some patients, is not denied. That some get well without any treatment is just as true. On the contrary, where one has seen one case cured or materially improved by medicine, he may see a dozen cured or greatly benefited by surgery, even under circumstances which do not give surgery a fair trial; viz. after the inroads of the disease have so impaired the heart, kidneys, liver, etc., that surgical intervention for any purpose is hazardous.

It would be rash to say that every case of exophthalmic goiter is a surgical case. Practically every case, however, is surgical unless too much time has been wasted in trying this remedy and that. Almost every goiter, like every cancer, has had, at some time, a surgical stage.

The non-surgical cases are largely those

that have waited too long. The patients who die from goiter operations by skilled hands are, like the patients who die from appendicitis operations, those who have waited too long.

Surgery, where it is fatal, is fatal twenty times because done too late, where it is fatal one time because done at all.

* * *

Goitrous individuals contemplating operations will want to know:

(1) What are the chances of my surviving the operation?

(2) Will I be cured?

(3) Are any serious incidental after effects probable?

Two major factors influence the answer to the first question, mortality of operation. These factors are the stage at which operation is undertaken and the skill of the operator.

The early operation is the successful operation. If surgery be invoked merely as a last resort—after the patient is plainly going to die without an early change—radical operation will be done to the discredit of surgery. It is almost as hopeless as invoking surgery to save a patient from imminent death from a typhoid perforation when the picture is no longer one of perforation, but of general peritonitis.

Nor should the occasional operator utilize a goiter to get experience. Let him get experience with operations, if you please, but not with goiter operations.

The mortality of the radical operation in the best hands is one to four per cent. This means that all persons are not operated upon. It means that good surgical judgment has denied operation to those advanced cases wherein the heart has become worn out.

Three years ago the average mortality in five of the largest clinics had been 9 per cent. The mortality in these same five clinics is now running probably under 3 per cent.

The next most pressing question is, Will the patient be cured? So far as we know there is nothing which will cure myocarditis or fatty degeneration of the heart, kidneys and liver. The best one can hope to do is to prevent such lesions from getting worse. If they have already become established because of a goiter, we can no more hope to actually cure them by removing the goiter

*Read at meeting of Medical Association of Georgia, Atlanta, Ga., 1914.

than if they were due to some other cause; we have at least a reasonable hope, however, of stopping these processes by removing the cause—if they have not progressed so far that we dare not take the necessary steps.

In the average case, if judicial partial thyroidectomy be done before the general health is impaired—particularly before the heart has become seriously embarrassed—(not before tachycardia), the patient may be confidently assured that **all** the symptoms will probably disappear.

The exophthalmos, if present, subsides last; it may not entirely disappear. Krecke says he has not seen it entirely disappear in any instance. This statement is not in accord with the reports of most other surgeons.

The Mayo clinic reports approximately 70 per cent cured, 19 per cent improved, 5.8 per cent slightly improved, and 5.2 per cent not improved.

Klemm reports twenty-five patients out of thirty-two remaining cured after eight years: one improved; one not improved; five not traceable.

Garre traced twenty patients five years or more after operation. Exophthalmos had disappeared in twelve, lessened in three, remained unchanged in five. Nervous disturbances were still apparent in all cases, and the tachycardia had quite disappeared in only four (discouraging). Ten were in excellent health. He collected statistics from various clinics which statistics showed 85 per cent of patients cured or markedly improved.

Dunhill says that only one out of thirty-two patients was not benefited by operation at his hands.

* * *

The third question put by the patient is, Will there be any incidental serious, late or permanent, results from the operation?

One may fail of an ideal ultimate result from the following causes:

(1) Removal of too little of the gland. There is no invariable guide as to exactly how much gland tissue ought to be removed. The amount of thyroid tissue may be reduced to one-sixth of the normal gland.

(2) Removal of too much of the gland. This will be followed by symptoms of myxoedema. Thyroid extract will then be indicated.

(3) Removal of the parathyroids. These are best preserved by leaving the posterior capsule.

(4) Section of the recurrent laryngeal nerve. This is likewise best preserved by preserving the posterior capsule and by clamping in long axis of neck. Temporary hoarseness is common after the average operation. It is worse the second day than immediately after the operation.

Kind of Operation.

The ideal operation for the average patient is, as previously stated, partial thyroidectomy. In case of symmetrically enlarged glands removal of a part of both lateral lobes is wise.

A substitute for this ideal operation is sometimes advisable, the substitute being ligation of the superior thyroid arteries and veins on both sides. It may be done under local anaesthesia if thought best.

This ligation seems to be advisable, especially in late cases, where, on account of the grave condition of the heart or on account of the extreme vascularity of the tumor, the more radical removal of the gland should not be undertaken. This procedure often greatly mitigates the symptoms so that the patient gains in weight and is so improved generally that later operation may be safely undertaken.

Cause of Symptoms.

Every person with active ex-goiter of whatever degree of severity presents unmistakable **evidence of increased secretion by the gland and of increased absorption from it.** Further, the severity of the symptoms is almost, if not quite, invariably determined by an increase in the size and number of actively secreting cells.

So true is this that one experienced in the pathological histology of the thyroid can, by examination of sections of the removed gland, reconstruct, so to speak, the symptomatology with remarkable accuracy. That is to say, he can examine the gland and tell you if the patient has exophthalmic goiter and if so, whether the symptoms were severe or mild.

These undoubted facts suggest the remedy—removal of enough of the gland to reduce the secreting bulk to normal. Theoretically an agent which will combat the undue

amount of circulating secretions or which will lessen the secretory activity of the thyroid cells is indicated; but no such agent, even approximately specific, is known.

No matter whether one take the view that the thyroid normally produces a substance which is necessary to body nutrition, or whether its secretion normally neutralizes poisonous substances resulting from body metabolism, the fact remains that hypersecretion by the gland is followed by

- (1) Tachycardia,
- (2) Nervousness,
- (3) Exophthalmos (perhaps).
- (4) Physical enlargement of the gland (perhaps slight).
- (5) Muscular weakness.
- (6) Degenerative processes in various vital organs (late).

and that any procedure which limits the hypersecretion limits also the symptoms.

These two things must be kept in mind:

First, the severity of all the symptoms varies under the influence of rest, mental and physical, quietude, hygiene, etc., on the one hand; and of exciting surroundings, physical exertion, worry, improper food, and thyroid feeding on the other; they even vary without any apparent cause.

Second, in what may be called the natural course of events, the symptoms of hyperthyroidism are due, **if the patient lives long enough** (four to twelve years in average cases), to abate; and the tendency is for them to disappear except as they may now be dependent on impairment of the long suffering heart, kidneys, liver, spleen, nervous centers, and other vital organs from the previous extended overstimulation. Indeed the tendency is for the pendulum to swing now beyond normal and for evidences of hypothyroidism (myxoedema) to appear. That the impairment mentioned is so marked and destructive as to leave the patient a semi invalid is the common experience. Histologically this change (through years) is accompanied by, and explained by, disintegration or destruction by exhaustion, or by antostimulation, or by blocked absorption (hence pressure and cyst formation) of the thyroid cells.

ILLUSTRATIONS ACCOMPANYING ARTICLE OF DR. E. G. JONES.



Fig. 1.

Parts of both lobes removed in case of typical toxic goiter with beginning exophthalmos. The volume of tissue is smaller than indicated in the picture, the photograph being less reduced in size than other photographs shown herewith. All the symptoms were cured by operation excepting the exophthalmos; it is too early yet to know the effect on this. An illustration of the lack of correspondence between the size of the growth and the severity of the symptoms. **The most troublesome goiter is usually a small goiter.**

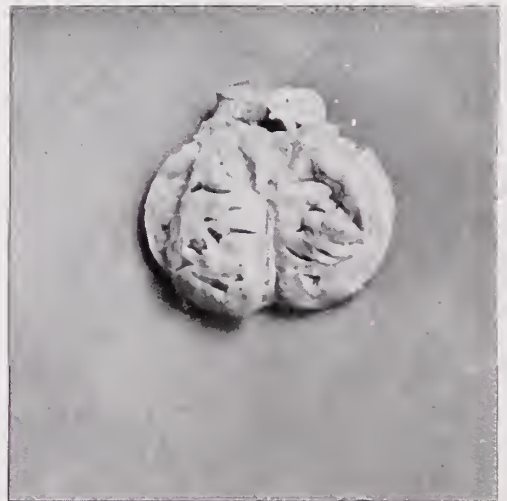


Fig. 2.

Single adenoma accompanied by well marked symptoms of thyroid intoxication—tachycardia, loss of flesh, loss of strength, nervousness, but no exophthalmos. Removal was followed by what seems to be perfect restoration of health, no serious impairment of heart and kidneys having been suffered at time of operation.



Fig. 3.

Adenoma accompanied by no special symptoms. This type of goiter is easy to dispose of by operation. Even if such a growth cause no symptoms at the time of observation, it is a distinct and undoubted menace to health.



Fig. 5.

Adenoma undergoing colloid and cystic degeneration. So far as this growth itself is concerned it is practically incapable of causing symptoms. Its presence, however, in the thyroid may so alter the activity of the neighboring tissue as to cause perversion.



Fig. 4.

Quite a large bilateral goiter of the so-called parenchymatous nontoxic type. Deformity and the likelihood of later trouble were the only circumstances calling for removal. This gland was enlarged because the secretion was not absorbed from it; this explains in the average case, the lack of symptoms.



Fig. 6.

Multiple adenomata—a typical pathology in many long existing goiters. This patient, like many others with similar growths, had suffered the characteristic ebb and flow of health through several years, and while not profoundly toxic at time of operation was in a state of semi-invalidism. Whether such persons are cured by operation, or by any other means, is determined by the integrity of the vital organs, or the lack thereof, at the time.



Fig. 7.

Multiple adenomata. Note groove in which trachea lay.



Fig. 9.

Compared with growths shown in other illustrations, this tumor is smaller than indicated. Its removal brought pulse from 100-120 to normal. Very troublesome choreic movements also disappeared at once. An excellent example of the fact that a small growth may cause very troublesome symptoms.



Fig. 8.

Single adenoma removed by enucleation. These growths may or may not cause troublesome symptoms during their early growth; if they do not, their presence is usually incompatible with health several years after their appearance, so that their removal is undoubtedly wise.



Fig. 10.

Parts of both lobes removed in case of moderate toxic symptoms.

MEANS AND METHODS THAT SHOULD BE EMPLOYED TO INCREASE THE LONGEVITY OF MAN.*

A. L. R. Avant, M.D., Savannah, Ga.

In order that we might study this subject with the broad and liberal comprehension that the importance of the theme would suggest, we shall deem it prudent to fortify our position by subdividing our thoughts under several different heads or divisions.

First we shall maintain that we, the doctors, are greatly to blame for the very great disparity in the difference of the age of the human family in the days of Methusela and those of the present time. In the first place, the teachings we receive in our medical colleges are too divergent one from the other. In other words, we have too great a diversity of methods of teaching, thereby prohibiting that concentration of thought in that concise and systematic manner that is always conducive of the very best results in all things that require concentration of thought and energy. It is a noteworthy and regrettable fact that our teachers disagree both as to the mode of administering and the therapeutic effects of various drugs, and the modes and methods of arriving at a proper diagnosis. The very inefficient methods at best are so irregularly and differently taught that the beginning practitioner has a very trying time in determining the nature of the malady called upon to treat, and how very soon after he gets out of his Alma Mater does he begin to realize the inefficiency of the system of his college training, and he is forced to delve into his books to aid him in his search for knowledge which he feels he so sorely needs, only there to find more conflicting ideas advanced than he had received in his schooling. All this, then, in the very beginning tends to weaken our faith in the noble profession whose perplexing pathway we are trying to tread, and we are forced to begin thinking as never before, for ourselves, and if we are minus, or lacking in that most needed, and above all things else, our literary training and education, we are in a very poor condition to think aright and to draw scientific deductions from the evidence adduced. It is then that we begin to dig out a little narrow rut, all our own, that we purpose to travel alone and do the best that we can for

the poor unfortunates that by chance or decree may fall into our hands, for by chance young Dr. Popular is in our midst and a very close friend of the patient's grandfather or second cousin, and we are urged to get this poor, struggling, inexperienced practitioner to treat the patient who, we might say, has poleomyelitis or puerperal fever, or an abdominal gunshot wound; or there might be a patient by the decree of the law who has a brother-in-law who had by another decree of the law very recently been given authority to write M. D. to the end of his name. This patient from some other decree is seriously suffering with a long standing case of eczema or pruritis ani or vulve, of which the young M. D. had only heard of in a few lectures by the very exclusive and greatly learned skin teacher or professor; and if this particular instance follows the path that such cases usually pursue, this young M. D., be he ever so well equipped, is decreed to never practice in this patient's house again. We are only mentioning these points casually, that we may be able to more strongly press home other thoughts that we hope to present further on in this paper.

Secondly, regarding our responsibility to the health conditions that exist, we have to consider the inequalities that exist in regard to the uniformity of the requirements of the forty-nine states and territories of this our proud United States. However, not united in medical practice, laws nor requirements, but each having a law unto themselves, formulated and enacted into the status of these numerous commonwealths by a bunch of lawyers, carpenters, merchants and blacksmiths, without the slightest idea even of hygiene, much less the demands of the health conditions that need protection in their respective localities, never a question asked nor a thought given to the doctor, the man who has to go out and fight these battles with disease in the lonely vigils of the nights and in the scorching rays of the noonday sun, as well as facing the wintry blast of sleet and snow, driving through vales and over hills, alone and unthought of, only when in some dire affliction they should need one of these unprotected wayfarers. Generally speaking, we are not protected from the people and the people are not protected from us; until quite recently this has been notoriously the case.

No longer ago than a quarter of a century, when I received the degree of M. D. in this

*Read at meeting of Medical Association of Georgia, Atlanta, Ga., 1914.

fair city in which we are now assembled, in some theater, which I suppose has long since become extinct, I only had to attend two courses of lectures of six months each, in different years, and a medical diploma presented to a clerk of some superior court of this state was all the prerequisite we were required to present in order to go to work in our noble calling. But be it said in honor of my teachers who consisted of such men as H. V. M. Miller, William Abram, Love, Lewis Jones, A. W. Calhoun, W. F. Westmoreland, Dr. Todd, Dr. Armstrong, Dr. Harden, Dr. Kendrick, and their collaborators and assistants, they did their work well and I think thoroughly with the facilities they had at hand; but you who have been required to attend a course extending from three to five years, can best imagine how poorly equipped I was with the weapons of warfare to engage in the strenuous and arduous duties of a country practitioner, which duties I then presumed to assume.

Now, methinks, the doctors of that day were in a measure responsible for that state of affairs, for they were aware of the needs and requirements that the profession and practice of medicine demanded, better than anyone else, if our lawmakers did not, then they could and should have lengthened the time of attendance and enlarged the curriculum, and required a higher standard of literary attainment or education than was then demanded.

Another very detrimental factor that is retarding our progress is the absence of vital statistics. From every phase of this important situation, in this grand old Commonwealth of Georgia—the pride of the South—be it said to our shame we have no such thing. With the exception of our larger cities such a thing is unknown, and I have it from pretty good authority that even our large cities have not that perfect system of vital statistics that they should have, and that is essential to protect every interest that is involved. Today we have absolutely no means at our command by which we could even approximately determine the number of births or deaths that has occurred in our State for any definite period since 1910, and, of course, we are all aware of the fact that the information then obtained is far from accurate. I think that we may safely say that we have at this time in Georgia a population of one and three-fourths million white, and about twelve hundred thousand colored,

and over this vast number of citizens we can give no definite account of what the deaths are produced by, nor of what condition the parents are in who give birth to our hordes of children. We do not know where the great white plague is most prevalent, whether in the city, hamlet or country, on our hills and mountains or in our valleys and low lands. Any effort to determine that fact would be the merest guesswork—a huge joke. How does that sound for Georgia? What does it speak for those who are responsible for this condition? Should some philanthropist, out of the goodness of his heart, decide to lend us a helping hand to fight tuberculosis, by establishing hospitals and donating a fund for their support, he could not determine where to locate such institutions, as he could not obtain any official data by which he could be governed. We are in no position to know what amount of financial aid our State is giving to advance the interest of preventive medicine. We have a State Board of Health, it is true, but of what avail is it to the masses, as it is not backed up by vital statistics, through which source it should receive its data upon which to base its policies and investigations. It reminds us of a full rigged ship under sail, but without a rudder to guide its course. In consulting a government report on the subject of vital statistics we find that there have been ten cities selected from widely separated sections of our country, and from the standpoint of population, ranging from 81 to 90 inclusive, we have the following report. From each of these cities in the following order the amount is what each city donates per capita of population for the interest of the health of its citizens: 11, 44, 7, 21, 18, 46, 43, 12, 12, 24 cents, respectively, the average being 23 8-100 cents per capita. In my own city we get 46 cents, far above the average, as you will observe. In this your beautiful cosmopolitan and metropolitan wealthy city you give the enormous sum of 35 cents per capita of population. In Savannah, my home city, the municipal government donates for fire protection \$135,743.00, or \$2.09 per capita; for the police department \$113,306.00, or \$1.74 per capita, and for our health betterment we receive \$30,109.00, or 76 cents per capita. This data was for 1910. So we can readily see that it is all a commercial proposition, and in the reckoning we see that the human family is of the least consideration and value. In my city we have no housing restrictions, by

which the number of inhabitants occupying a given space can be controlled. Our poor we always have with us, congregated in various numbers in very small spaces. Often three to six in a small room, and often one of them suffering with tuberculosis, and, of course, under such conditions they have to lie down and sleep with it. They have to get up and eat with it, and apparently it is no one's business to attempt to relieve the situation. In our home city we have one of the most competent bacteriologists in the nation; his salary, combined with his assistants and the accessories, amounts to several thousand dollars per annum, all of which we are proud of and feel that it is the best spent money from our tax receipts. One of this distinguished gentleman's most arduous and regular duties consists of the examination of our milk supply, which has proven to be a great boon to the health conditions of our fair city. It has aided us very much in eliminating the spread of typhoid fever. In fact, since these rigid examinations have been instituted, we have had but very little of this much dreaded disease in our midst. Also it has doubtless been a very potent factor in saving the lives and building up the health of many of the lovely babies of our city. But the lamentable fact still remains that our municipal government does not spend one dollar in an effort to stamp out or prevent the spread of tuberculosis in our midst, which is conceded by all to be the greatest and most prevalent plague of the earth today. Its insidious manacles are reaching forth and with their deadly grip have grappled with the occupants of the hovel, the mansion and the palace, and the effect of its death-dealing power has caused statesmen to shudder, scholars to delve deep into the hidden and unexplored depths of science, in the effort to discover and bring forth the remedy that would stay its deadly stroke. Philanthropists have said, "Here, take my millions, go forth and spend it for the healing of the nations," with practically negative results. We, as a people, entertain such a fear, such a horror of the suffering and carnage of war; yet facts and statistics tell us that the results of our most destructive and devastating wars are nothing to compare with the destruction that is being wrought by this fearful enemy of human life, and the great and alarming feature of this is that there is no concerted action on the part of our lawmakers and the doctors, and all other powers that be, to try to stop its

ravages. Our own profession is not organized except in a very small way, compared to the whole membership. We are poorly equipped for enlisting in any engagement for the strengthening of our position and condition in any community in which we live. Here in Georgia we have approximately 3,500 doctors of all kind, divided up in the following ration: 3,000 allopaths, 50 homeopaths, 350 eclectics, and 100 osteopaths. And out of this large army of men claiming to be doctors, only about 1,250 belong to our State Medical Association, leaving out of this organization about 2,250 doctors, almost double the number on the outside that there is who belong to us. So upon what hypothesis do we base a hope to accomplish anything of interest to our organization, with this large majority of our brothers who should be our co-workers, out of our ranks, and are not in active sympathy with our great work. Often we are humiliated to have to confess that frequently we have to combat and tear down sentiment and teaching that this unorganized faction of our profession disseminates and instills into the minds of the laity, thereby weakening and destroying our influence for good. We have another grave barrier to our thorough organization, which is petty jealousies and personal dislikes among ourselves. We do not have that love and fellowship for each other that should prevail in a profession of the dignity that we have and that is accorded us by others. I beg that all join with me in the thought and determination to get above these little mean things that tend to disrupt our ranks and keep cold water thrown on our progress and development. Let us forget ourselves and work for the common good and uplift of all, thereby fortifying our profession with a strong sentiment for good.

Now let me urge this point upon every doctor, that we get busy and try in every legitimate way possible to get all the doctors in Georgia into our fold; let us who are within, entreat and encourage them to become an active part of the organic body; teach every one that in union there is strength and in disunion there is weakness and decay; let us broaden out, renew and enlarge our energies in the effort to get all to join our societies and become workers in our great cause, thereby not only benefitting and upbuilding the masses, but in addition financial success to our estates, laurels to our

fame, and stars to our crowns (perchance we obtain one).

We will now proceed to consider our subject from the standpoint of eugenics, a factor very little considered, either in or out of the medical profession, and I must say that I am grieved to see that a great many who do consider it at all, do so from the standpoint of the skeptic and derider and sentimentalist; they take a pessimistic view and appeal to the baser sentiment of those who sympathize with the living products of the unfit, instead of lending their thoughts and energies to prohibit the further propagation of that class of the human family that can do aught but degrade instead of elevate it. Every child born to or of an unfit parent adds only another stigma against the intelligence of our nation and places another barrier in the pathway of our intellectual progress, and it recognizes the act as legitimate and right, an act which our most illiterate farmer would not for a moment tolerate in or among the animals which he raises on his farm, for in his case only the very best of the females are kept as breeders, and only the very best males are allowed to retain their sex distinction for the propagation of their race. And so it is in every instance with the farmer and the poultry raiser, and with all those who are interested in any and every specie of the animal kingdom, whether they are raising them for beauty and their pleasure, or for food for home consumption, or raising them for commercial purposes.

We also find this rule applying with equal force in the vegetable kingdom, for the man who has exercised his energies and skill in producing a variety of corn that grows in our fields, that will produce five ears to the stalk where only one grew before, is considered a great benefactor to the farmers and the commercial world. In like manner the man who has so selected his cottonseed that he is now able to produce one bale of cotton to the acre where it formerly required five acres of land to produce the same amount, he has been the human agency in adding millions of dollars to our nation, and has indirectly been instrumental in building industrial and manufacturing cities that give employment to untold numbers of our inhabitants, and has made many of the millionaires of our great country. Even the flowers which beautify the parks of our city and the yards of our homes have required the untiring energies of the florists, to perfect

their beauty to the present state of perfection, that the average man would never dream of; likewise our fruit and vegetable growers have spent vast amounts of money and hard work and honest endeavor to bring them all up to their present state of perfection and utility. So in every other branch of economic endeavor. Every nerve and fiber of energy has been strained to the limit; every dollar that has been possible to obtain, either from the national or state government, or from any and all kinds of corporations, whether supported by taxation or philanthropists, has been collected and spent to increase the betterment of the animal kingdom and for the development of the vegetable family. The unfit has, in the one case, been pulled up from the earth and destroyed, and in the other has by surgical procedure or otherwise been disqualified from propagating their kind. With what results, might I ask? First, the animal kingdom is today in the highest state of perfection from every standpoint that it has ever been in, in the history of the world. The vegetable kingdom is in the very zenith of perfection; today the sons of our farmers are going out and perfectly astounding their old dads, and showing them how to make 200 bushels of corn to the acre where their fathers previously made five, ten and thirty bushels per acre.

Quite a degree of this success has been attained by the careful selection of the seed which they plant, by producing large and numerous ears of corn in the first place, and a large stalk, well loaded with bolls of cotton, in the second place. Our national government has spent millions of dollars in sending out improved seeds to the agriculturists of our country in an effort to increase the product of our soil, and to increase its earning capacity.

Now, let us see about man, the crowning work of God's hand in the morning of creation. It is only in recent years that our states have begun to realize the necessity for state boards of health, and to contribute funds for their support, and from the information at hand we are forced to the conclusion that many of them today exist only in name, insofar as their service for general good is concerned. I understand that our own state is so poorly supplied with funds that the board is greatly hampered and retarded in its work for the good of our commonwealth that it was designed it should attain. Our national government has appropriated

\$500,000 at the disposal of the president when called upon by the governors of the several states, when needed to stop the spread of transmissible diseases. That is what the law-makers of our great nation have considered as ample aid to the health conditions of one hundred million people. Now, you can very quickly figure out the pro rata share that is allotted each one of us for the upkeep of our most valuable asset, to-wit, our health.

It is true that the federal government is now doing considerable research work through the marine hospital service throughout our country, at what expense I have not been able to learn, but be you well assured that the amount is infinitesimal, compared to the grave conditions that confront us today, even in one disease, to-wit, pellagra, which is today, I believe, the greatest and growing menace (at least in many sections of our country), that confronts us at this time. Indeed, its ravages are more terrible than those of the great white plague, where it is prevalent; it is surely no respecter of persons, as it attacks alike the rich and the poor regardless of conditions or previous servitude. Now, if I mistake not, our national law-makers have seen fit, with their great knowledge and erudite learning, to appropriate millions of dollars to destroy the cattle tick and to stop the transmission of the boll weevil from one section of our country to another. Now, in all honesty and fairness, I ask is it fair and is it expedient that we should spend our millions to improve our horses, our cows and pigs, together with our corn and cotton, and all other vegetables, and then only spend our thousands for the betterment of man, and nothing—yes, I emphasize the word, nothing—for the improvement of man's condition, physically and mentally, except a very poor, common school education, and that is not even compulsory. The powers that be say, "Here it is; you may take it if you are so inclined, you may reject it if you will." In this great State of Georgia there is absolutely no restriction cast around the patient suffering with the worst case of tuberculosis, or the most virulent attack of syphilis, to prevent him from engaging in wedlock with the purest and sweetest girl in Georgia, and with her propagate his kind. In the one case his inability to beget an offspring without the predisposition to contract this terrible malady, and his ability of transmitting it to this lovely dupe of a wife of his, by living in daily contact with her. And in another

case, his life blood so saturated with this venomous poison that he will transmit his filth down to the third and fourth generation of his posterity, thereby giving us an offspring capable only of filling our hospitals, our almshouses and asylums with these innocent yet contaminated and debased creature of fate or heredity. For how very true is the assertion that like begets like, and that the sins of the father shall be visited upon his offspring for many generations. Many an infant is born a slave, a victim of poverty of brain and poverty of body, a veritable prisoner of fate and of vice. The birthright of many another is wealth, wealth of brain and of body. He is indeed a veritable free man who is not incumbered with the sins of his progenitor. To that child born free you can well say, you can make your life what you will, you may carve out and mold your character and decree your destiny regardless of what opposition may confront you, if perchance he has an indomitable will. But what a contrast to that one who has been born a slave to poverty and of vice. For no power of earth can supply that which nature and heredity has withheld and debarred from us. Hence he or she is a slave indeed whose fetters cannot be loosened, or whose bonds cannot be severed by man. The contemplation of such a thought is horrifying in the extreme. The prospect and anticipation of no prison life can be so pregnant with thoughts of gloom and despair, as this lamentable condition. Imprisoned within yourself, a slave to disease and destruction in your own house, your inherited home, the gift of your forefathers and progenitors. In this home you have got to stay, there to commune with your sorrow, with the sad thought of what might have been. In all other prison life the culprit always can and does indulge in the thought that some day in some way there may be a reprieve, a pardon, a release from those gloomy prison walls. But not so with those unfortunate whom we have under consideration. The die has been cast, their doom is sealed and the only gateway of their escape is through the door of death. Now, gentlemen, it would seem that it is needless to further dwell on this phase of this sad scene, yes, superfluous for me to lead your thoughts farther down this gloomy road of sorrow, unless we can and will go to work—yes, get busy, lay the axe to the root of the tree and fell it—fell it down to the ground, destroy it, that a different and more desirable growth

undertakers and looked over the records, and she has amassed quite an abundant literature on the subject of tuberculosis in Georgia; but she had to get it under very difficult circumstances, and what she got is not accurate—at least, it is accurate as far as it goes, but it is not complete. These figures which she has accumulated are here in charge of the W. G. Rowell foundation. They have the notes here and anyone interested can find out what she has discovered throughout the State. She found an enormous amount of tuberculosis everywhere she went, and the work would have been so much easier, so much more complete, if we had had vital statistics which were reliable. I think it is personally the duty of every physician in the State to do all he can at the coming session of the Legislature to get the Vital Statistics Bill passed.

Dr. L. C. Allen, Hoschton: I want to endorse the most excellent paper of Dr. Avant, and to say that at the last session of the Legislature I introduced a Vital Statistics Bill, and that bill was referred to the Committee on Hygiene and Sanitation, of which I am chairman, and after some little difficulty I secured the recommendation that the bill be passed from that Committee. That bill is on the calendar and will come up for action at the next session of the Legislature this summer. The bill as introduced is a long one, and it is a good one.

Now, in some of the states they have bills, they have laws for the collection of vital statistics that are very imperfect. This bill as introduced follows very closely and almost verbatim the model as sent out by the Census Department at Washington, D. C. The object of the Census Department is to get a similar law in all the states of the Union, so that the statistics of the different states can be handled at the Census Office in Washington with more facility. If we have different methods in different states it gives them trouble, and the data is not so reliable. This bill covers the entire ground and is endorsed by the Census Department at Washington. I am glad those who have spoken favor the passage of this bill. There is a good deal of objection to it, and it is going to have no easy sailing. In the first place, it carries a small appropriation, and whenever you go to the Georgia Legislature with any kind of a bill that calls for money, you will have objections raised, but the appropriation is

small and I do not really think the cost of the Bureau of Vital Statistics should be a very serious objection.

It has also been objected that vital statistics are of small value because of the fact that the cause of death as given by the attending physician is so often erroneous; that we make mistakes in our diagnosis about half the time, and therefore vital statistics are not of much value after all. I think that is far fetched. I believe the majority of the average doctors know when a man dies of smallpox, typhoid fever, pneumonia, whooping cough, measles, diphtheria, malaria and things like that, and that is what we want to know.

There are various uses for vital statistics. We are paying out here in Georgia \$50,000 a year to a Department of Health; we want to create more health officers; we want to have a health officer in every county in the State as soon as we can, and when we get these we will be paying more money for the Health Department. We want to know what the people are doing, whether their work is effective or not, and how do you know unless you keep books or tab of what they are doing? If they can reduce the death rate from typhoid fever, from malaria, from pellagra, from hookworm, or the other diseases prevalent in Georgia, the money will be well spent. If they do not reduce the death rate the methods ought to be changed. How are you going to know what they are doing unless you keep a record of the deaths in the State of Georgia?

Take the matter of births. There is not a child in Georgia that has a legal age. Without the registration of births you can have no effective legislation for the regulation of child labor. You hear a great deal said by statesmen, the press and by legislators about children working in factories; I do not care how much child labor legislation you pass, unless you have a law for the registration of births, the child labor laws will not be of any avail because the parents will overstate the age of the child every time they want to put it into a factory.

Dr. C. C. Harrold, Macon: I think someone should tell us how much of an appropriation is asked for in this bill, so that physicians will know throughout the State when speaking to the legislators.

Dr. Allen: Five thousand dollars.

Dr. J. C. White, Atlanta: I have the honor of knowing Dr. Avant and in knowing that he writes a good paper. I will not attempt to discuss the White Plague, for that has been ably discussed, but desire to speak of the other troubles mentioned, which are much more serious in the South than the white plague, and very much less attention has been paid to it in the past than to the white plague. I refer to the proper use of salvarsan and iodid of potassium and similar remedies, with laws which would prevent the criminally diseased people from getting married. If this were done it would empty the asylums of Georgia and of the South almost. It would stop so much locomotor ataxia and various serious troubles with which we are confronted in our Southland, and improve the human race in the South much more than the sending out of good garden seed from Washington with a view to improving our crops. I wish the people of Georgia could be informed of the fearful ravages of the ordinary common every-day city and country form of blood poisoning which Dr. Avant so ably discussed. If the laity knew one per cent of what the doctors know, a howl would be sent up that would shake the very ceilings of the building in which we are meeting. Something ought to be done promptly and radically to prevent, if you please, the matter of syphilis. I hope that in the future more attention will be paid to it.

Dr. J. G. Dean, Dawson: I want to emphasize the remarks Dr. Avant made with reference to negroes. We owe it to ourselves to take an interest in this work. There has been a great deal said about the situation in regard to negroes lately, and I think that it applies equally to every town and every city in Georgia. There are great many people who taboo the idea of paying taxes or in any way contributing to expense for the help of the negroes. I do not think we ought to look at the matter in that way. I do not think money spent towards building up the negro and improving his condition on sanitary lines is misspent. We ought to be willing to pay taxes a great deal more than we have done, and we ought to spend a great deal more than we do for the benefit of the negro. It must be remembered that our nurses and cooks come from the ranks of the negro, as a rule, in Georgia, and as Dr. Avant says, those negroes go out from our houses in close, uncomfortable, unsanitary places.

Probably half a dozen or more of them are to be found in one building. They cannot be healthful, and they bring to us diseases constantly that we can avoid and prevent if we will go at it right.

Most of the towns and all cities in Georgia enjoy systems of sewerage, but they do not run the sewer system to the extent of taking in the negro as they should do. Good sewerage betters the health of any town. In my town we have a number of sections that are very much in need of sewerage, and in most sections where there is sewerage the negro houses are not connected with it. A drainage system ought to be adopted in every town, not only in the houses of the white people, but in the houses of the negroes as well. If you build a house for the purpose of renting it to negroes, you should see that the house is not only kept in a sanitary condition, but you ought to see that the negro cares for it properly. Through the influence of bills which you have heard so much about and which we believe ought to pass, I think a great good will come. Every town should have a house inspector, then these negroes can be watched to see if they keep their houses clean and sanitary. Money appropriated for such a purpose will be well spent. In the days of slavery such a disease as tuberculosis among the negroes was comparatively unknown. There was, comparatively speaking, before the war, very little syphilis and diseases of that character among the negroes, not so much as now. The passage of a bill for an ordinance requiring that negro houses be connected with sewerage, with proper cleaning of the houses, would accomplish a great deal towards bettering health and adding years to our own lives, and rendering fewer the deaths which occur among the races.

The abdomen in disease is as mysterious as the future. One may venture a diagnosis in abdominal conditions and be correct as frequently as the weather forecaster, who hits his prediction in 40 per cent of efforts.
—Pittsburgh Medical Journal.

The mystery surrounding the pathological laboratory dazzles the general practitioner and allures him from old, reliable and well-understood methods. He may look wise at a highly technical laboratory report, but in truth he does not understand it.—Pittsburgh Medical Journal.

A REVIEW OF THREE THOUSAND CASES OF FEVER UNDER THE SALICYLATE OF SODA TREATMENT.*

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During the rapid progress of modern research it would appear that there have been but few accessions of facts as applied or in connection with materia-medica and therapeutics. The few new resources in that line would not seem to justify the pharmacist and physician in making any great claim to a very large field in which he could make a concise and complete statement of any particular drug as applied to the treatment of any particular disease.

In the years gone by there has been an infinite accumulation of material and an infinite amount of careful and conscientious sifting of the good, bad and indifferent in relation to drugs. And yet the treatment of disease, with a few exceptions, seems to be about the same as in the past; the only difference that I can see is that today there is a very strong tendency to the use of fewer drugs and less treatment, a larger confidence in nature and a greater trust in the Lord. Whether this be due to the mental attainments of a wiser generation or a retrogression of therapeutic research and knowledge, I am at a loss to say, but we can't rub out the fact that there are still some drugs that are useful and some diseases that are cured with them.

According to the title of this paper, it would appear that I am getting away from my subject, but a slight digression is sometimes excusable, inasmuch as it whets the appetite for what may follow, even though the paper may be concluded before one realizes that he has been listening to dry facts from a dry subject.

I wish to call attention to the use of salicylate of soda in the treatment of fevers, only for the reason that I have had the temerity to treat my cases with the drug, and also for the reason that my experience in several thousand cases would seem to allow me to speak with authority. I am not going to give you quotations of numerous charts or bore you with individual cases, but only to generalize the subject, so to speak.

More recent observers claim that the primary action of salicylate of soda is to in-

crease the force of the cardiac systole and the arterial tension; but that secondarily the pulse grows feeble and more frequent or unfrequent, the latter especially after large doses. Of these effects, the former is interpreted as showing an action of the medicine upon the vagus, and the latter a paralysis of the excitomotor nerves of the heart. The salt does not modify the temperature in health, but only in fever, which is thus explained: Febrile heat results from a diminished activity of the circulation due to a lessened power in the heart and arteries. Like digitalis and quinia, salicylate of soda increases the cardio-vascular tension and lowers the temperature. Like quinia it causes a constant deafness, noises in the ears, frontal headache, trembling of the hands and quickened breathing. It never produces dyspnoea. It undoubtedly has a decided diuretic action. A singular opinion has been expressed that it is only sedative to the calorific function when it acts as a diuretic. One authority says that he has yet to see the case of genuine acute rheumatism without complication in which the pain is not entirely gone and the temperature normal after six consecutive doses at intervals of an hour, on two consecutive days. This would seem to point to the fact that in such an instance the reduction of the temperature was the whole thing in a nutshell, since we know that in acute rheumatism complications can and do arise during the use of the drug and are not affected by it in the least.

That salicylate of soda does reduce temperature and does so promptly and effectually cannot be denied. Of course, in the intermittent types of malarial fever we get no results whatever, that is, no curative or permanent results, but it has been my habit in conjunction with the preventative or quinia treatment to give the salicylate during the time the paroxysm is on: it will in those instances reduce the temperature and make the patient more comfortable than almost any other drug I know.

In the continued fevers, be they due to malaria, enteric, typhoid, or what not, we have a remedy of great excellence. In my investigation of the drug I have written to the different drug houses for information. I have searched all authorities, but nowhere do I get enlightened as to whether salicylate of soda has any disinfecting qualities. As I am a firm believer in intestinal antisepsis, it has always been my idea and theory that the

*Read at meeting of Medical Association of Georgia, Savannah, Ga., 1913.

drug does act as an intestinal antiseptic. In the past thirty years I have treated quite a large number of fevers of the continued type, and as we are still in doubt as to whether we have a middle fever, we must call the majority of the cases typhoid, at any rate they were all undoubtedly enteric in character, numbers of cases have been tested cases—typhoid cases, beyond doubt, but I lay no stress upon this point, except as proof that the treatment held good in all forms. It has been my custom to treat all cases with the drug, hoping for and usually getting similar favorable results. No treatment or no form of treatment is infallible, deaths occur under all conditions and circumstances, and no physician has the right to claim that he has a panacea for any particular disease, but I do lay claim to an unusual success and it is my honest desire to awaken interest in those who are not familiar with the drug and to urge those who have used it in a desultory sort of way, to abandon the common notion that it tears the stomach to pieces and that the patients on that account are unable to take it. What is more gratifying to any fever case who takes to bed under that medical dietum of typhoid fever, that horrible diagnosis, which spells ten weeks maybe of dreadful illness, with its well known symptoms of muttering delirium, picking of the bed clothes, swollen belly, sordes, cracked tongue, hemorrhage, etc., and then perhaps death, than to realize at the end of six, eight or fourteen days that outside of a run of temperature there has been no serious illness and little suffering. This statement would indicate to you the results as I have seen them. I believe that at least 75 per cent of continued fever cases treated from the very beginning with salicylate of soda can be aborted in anywhere from six to fourteen days. If the cases should run for a longer period one has the supreme pleasure of simply treating a run of temperature minus the usual run of bad symptoms. I do not mean to indicate that this is to be the only treatment used, but it is certainly the mainstay. My mode of procedure is like this: From the first day of seeing the case, for adults, 15 gr. doses are given every two hours from 6 a. m. to 6 p. m. and continued from day to day without any letup. My idea in discontinuing the drug after the seventh dose is owing to the fact that with a longer continuation the patient becomes excitable and hallucinated, and passes a very restless

night. The seven 15 gr. doses a day seems to be about as much as any one person can bear comfortably, for this reason only do I limit the number of doses. Now, in children I find that in pushing the drug the doses have to be lessened on account of the depression and bad breathing which it causes; and yet I have pushed it in children to a limit where it looked as if it was impossible to take another breath, which condition would last for some days, even after the fever had departed and the drug had been discontinued, but no other harm was done. I found it very rare to have a stomach refuse the drug; given with Tr. Cardamon or Zinziberis it will stick about as well or better than anything else that I know of. Under the treatment that much to be desired condition, a clean mouth and constantly soft tongue, is nearly always a present joy. There is an absence of delirium, a pleasant skin and a soft pulse. Where the temperature runs above 102 and sponging is necessary, the patient is in condition to thoroughly enjoy that mode of procedure. Any other drug as calomel, turpentine and salts, may be used when necessary without discontinuing the use of the soda.

It would, in all probability, have been more convincing, or at any rate more scientific and business-like if I could have placed before you a number of fever charts of cases that I have in my mind's eye, but it would be impossible to do this without taking up valuable time which can be used to better advantage by many who come after me.

AMERICAN MEDICAL ASSOCIATION.

Department of Physiology, Harvard Medical School.

My Dear Doctor:

The Bureau for the Protection of Medical Research of the American Medical Association is desirous of obviating as completely as possible any cause for complaint against animal experimentation, as well as any criticism of new methods in medical practice. Much of the "evidence" cited by hostile agitators is taken from articles in journals devoted to the medical sciences.

Instances are frequently cited in which it is claimed that, as there is no mention of anaesthetics, animals have been experimented on without anaesthesia. Well known methods of medical diagnosis are described as experi-

ments, because authors have been careless in their descriptions.

Will you not aid the efforts of the Council by a very careful examination of articles submitted to you for publication, with especial reference to the use of words or expressions likely to cause misapprehension regarding the experience of the animals used for research? And in every instance in which anaesthesia is a condition in the investigation, will you not point out to authors the importance of making this fact prominent? In clinical articles which discuss new or unusual methods of diagnosis and treatment, it is important to make clear that these methods are undertaken with the consent of the patient or his relatives. This is especially important in connection with children. We hope that by the co-operation of all who are interested in the promotion of medical science, the development of a public opinion hostile to medical research may be checked, and that there may be, instead, a growth of popular understanding of the aims, the methods and the significance of the results of animal experimentation and their practical application in the relief of suffering in man.

Thanking you for any assistance in securing these results, I am,

Very truly yours,

WALTER B. CANNON,

Chairman, Bureau for the Protection of
Medical Research.

NEEDS OF CHILDREN IN RURAL DISTRICTS.

In her address before the National Conference of Charities and Corrections at Memphis the other day Dr. Frances Bradley of Atlanta called special attention to the failure to look after the hygienic and sanitary needs of children in the country districts. She spoke of a recent report of Dr. T. D. Wood of Columbia University, showing the increased percentage of both physical and mental defects among country children, as compared with city children.

The difference is owing of course to the fact that medical attention can be had more easily and quickly in the city, that there is in many cities periodic medical inspection of school children, and that organizations designed to teach the care of children in the home are more numerous in the cities. As Dr. Bradley pointed out, there is need of getting parents and teachers in the country dis-

tricts to give more attention to the safeguarding of the children's health. It would be a fine thing for the future citizens of Georgia if in every county in the state doctors would volunteer to make occasional inspections of school children.

Medical associations, it would seem, should easily find among their members some who would gladly give two or three days a year to the work of inspecting the school children and pointing out what should be done for them. Then, later on, when the state has more money for the schools, doctors could be employed for that purpose. The salaries of county physicians might be increased sufficiently to enable them to spare the time needed for the inspections. If something along that line is done in the country schools of the state at once it will mean without any doubt the lengthening of many lives and the prevention of many hours of misery and suffering.—Savannah (Ga.) News.

JESUP TO SOON HAVE HOSPITAL.

The Enterprise Is Headed by Some of Jesup's
Leading Physicians.

Drs. J. G. Tuten, E. C. Cummey, D. L. Moore and J. T. Colvin are forming a company for the purpose of capitalizing and erecting a commodious hospital in Jesup for the care of sick, lame and afflicted.

Architects are working on the plans and specifications of this building, and as soon as completed will submit same to the above mentioned doctors for their approval.

This is an institution that is very much needed in all the towns of any size and especially in Jesup, as it is so centrally located.

The lot for this building has not been definitely decided on yet.—Jesup (Ga.) Sentinel.

The more money The Journal of the Medical Association of Georgia makes out of its advertisements the less it costs the State Association to run the paper. This means that every member of the State Association has an interest in the advertising columns. If one business firm advertises and another does not, patronize the one that does. It is money in your pocket.

An advertisement in The Journal of the Medical Association of Georgia will bring results. Rates sent on request.

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OF THE

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EXCLUSIVE PUBLICATION: Articles are accepted for publication on condition that they are contributed solely to this journal.

CONTRIBUTIONS TYPEWRITTEN: Authors should have their contributions typewritten—double-space and with ample margin—before submitting them. The expense is small to the author—the satisfaction is great to the editor and printer. We cannot promise to return unused manuscript, but try to do so in every instance. Manuscript should not be rolled or folded.

ILLUSTRATIONS: Half-tones and zinc etchings will be furnished by THE JOURNAL when satisfactory photographs or drawings are supplied by the author. Each illustration, table, etc., should bear the author's name on the back. Photographs should be clear and distinct; drawings should be made in black ink on white paper. While we cannot guarantee to return used photographs and drawings, we use our best endeavors to do so after the article is published, if the word "return" is written on the back of each.

ANONYMOUS CONTRIBUTIONS, whether for publication, for information, or in the way of criticism, are consigned to the wastebasket unread.

NEWS: Our readers are requested to send us items of news of a medical nature, also marked copies of local newspapers containing matters of interest to physicians. We shall be glad to know the name of the sender in every instance.

MEDICAL ASSOCIATION OF GEORGIA.

Minutes of the Sixty-Fifth Annual Session,
Held at Atlanta, April 15, 16 and 17, 1914.

The Association met in general session at 10:30 a. m. and was called to order by the President, Dr. Ralston Lattimore, of Savannah.

The President invited the ex-Presidents of the Association present, the President of the State Board of Examiners, the Chairman of the Board of Councilors, President of the Municipal Health Officers, the President of the State Board of Health, to take seats on the stage.

Invocation by W. R. Hendrix, D. D., Atlanta.

O, Thou eternal God, in whom we all live and move and have our being, we pause upon the threshold of this day's work that we may humbly and reverently worship Him, the giver of every good and every perfect gift. We come to thank Thee this morning for this beautiful day and for the lovely land in which Thou hast cast our lot. We give thanks to Thee as our eyes roam over the fields and hillsides of our own beloved state. We give thanks to God whose hand has fashioned them in beauty, and we pray Thy blessings may rest upon us all through our state, and that our fields may all be blessed with fruitful seasons. We thank Thee for the men and women that dwell in these fields and towns and villages and cities. Thou hast by thy grace shown us that we have come to a noble inheritance, and we pray God to grant that there may never fail us men and women of the highest and truest and noblest ideals. We thank Thee, too, this morning for the presence in our midst of this company of men devoting their lives to the service of their brothers, and not only devoting their lives, but seeking by all wisdom and all grace that time and inspiration may bring to their service, to render such service as shall be availing and helpful. We pray Thy blessings upon these men. God grant their families may be shielded from every harm in their absence from home, and their patients may not lack skill and tender personal encouragement, but that all may be cared for. And we pray they may enjoy the blessings of this special occasion, that the fellowship may be sweet and refreshing, and those men who are in the presence of pain and suffering constantly may be refreshed and renewed in mind and body by the sessions of this occasion. We pray Thy infinite wisdom may guide their deliberations in this matter; that this may be a profitable occasion to them and through them to the thousands of people represented here this morning. And we pray Thy blessings upon all our land. Oh, God of grace, Thou hast favored us so richly. Continue Thy grace to the children of men. We pray that all through the sessions that are opening today, there may be the constant presence of that supreme wisdom by which all of us are made wise enough for the tasks that rest upon us. Thou hast promised that wisdom shall come down from Heaven to all who humbly seek. May these men be guided in their work. God bless our city during the

stay of these men. God bless the men of our state who are dedicating their lives to the work of healing the sick. May all of our people rejoice in the confidence that comes from everywhere, joining hands with them in making our land a place where it shall remind us of the prophecy of that land whose inhabitants shall never say, "I am sick." Hear us in our prayers; guide us through the day as we take up its responsibilities, praying that Thy hand may rest upon us now and evermore. Amen.

The President: Hon. J. G. Woodward, Mayor of Atlanta, has kindly consented to deliver the address of welcome on behalf of the City of Atlanta. (Applause.)

It gives me great pleasure to call on the Hon. J. G. Woodward, Mayor of this city, to address you.

Address by Mayor Woodward.

Mr. President, members of the Medical Association of Georgia: Let me assure you, it is a great pleasure to welcome this organization to Atlanta. While possibly it is not necessary for me to indulge in that expression, as you are all Georgians, and you know the feeling of Atlanta and its people toward visiting delegations, yet your meeting here means great things both for the people and your profession. Great things can be done by you in the elevation of your profession and the benefits to mankind. In welcoming you to this city, it is hardly necessary for me to go into any extended description of the city. Most of you know it, possibly some from its earliest birth. We have a splendid city, and it is the pride of every Georgian. It is the growth of a lifetime. It has magnificent sky-scraping buildings. As a doctor told me, it started from a wilderness, and then passed through the fiery ordeal of the war. Now, behold what has taken place here from the meager foundation that was left us!

Atlanta extends to this organization a most hearty welcome because you are amongst us and of us. You are with us in health and you are with us in sickness. That is the time when they all call for the doctor.

Now, it is to be earnestly hoped, and I believe it to be true, that this delegation is to be handled by the physicians of Atlanta with true hospitality. I predict for you a pleasant time, and I believe your meeting will be profitable to all concerned. At the end of your duties, may you all return to your homes and find all well there. Let me, on behalf

of the City of Atlanta, extend to you not only on this occasion a formal welcome, but a most hearty one within our gates. (Applause.)

Dr. Dunbar Roy delivered the following address of welcome on behalf of the Fulton County Medical Society:

Address of Welcome by Dr. Roy.

Mr. President, Ladies and Gentlemen, Members of the Medical Association of Georgia: The word "duty" has no connection with what I shall say today. It has always seemed to me to carry with it the feeling of some unpleasant task to perform, but rather would I let my words be spoken not only for myself, but for the members of the medical profession of Atlanta to show you their feelings in having you with us today.

I would that the Committee of Arrangements had selected some one far more gifted than I in speech to deliver to you, gentlemen of the Medical Association of Georgia, these words of welcome and good cheer; and yet I feel that the selection has not been entirely inappropriate, not that I am gifted with any words of speech, but because I have the distinction of being one of the future old doctors of Atlanta, who has the honor and distinction of having been born in this great metropolis. (Laughter and applause.)

On occasion like this, I know it is customary to speak of the greatness of one's city and state, but I feel that to do it would be inappropriate in the presence of so many of our distinguished confreres from Savannah, Augusta, Macon, and other large cities, and I rather feel that perhaps discretion in being silent on this point is the better part of valor, as we have so many physicians in Atlanta that should you hear in your rambles around some foreign accent, I trust you will remember the number is so great that we have representatives from all nationalities in the world. (Laughter.) It is true that we have them from every part of this Empire State; but it is also true that we are united as a profession; we are brethren as such, and we are also Georgians. I feel that I can no better express myself than in the words of one of the state's most distinguished sons, whose words give me this prophetic utterance: "Yes, the Georgia of Oglethorpe; the Georgia of 1776; the Georgia of 1860, is the Georgia of today, is the Georgia now." (Applause.) We are Georgians united in this noble band of the medical profession, and as

such, it matters not where we were born, our labors are in this grand old state, and as such now we are Georgians.

I know also that it is customary on an occasion like this for the speaker to recount the glories of the past and speak of the greatness of the ancient city in which he lives, but, my fellow physicians, this I cannot do, for you well know that Atlanta has risen phoenix-like from the ashes of the Civil War and is the product of the last forty-five years. She has not an infant guard with which to cover her supple limbs, and metropolitan and cosmopolitan though she is, there is no city within the nation that gives a warmer welcome to visitors within her gates than is done by the citizens of Atlanta. (Applause.) But it is not my purpose to say too much of our city. You are here among us. It is not for me to extol the greatness of our profession. We are not here to tell of the stories of our life's work. How few, besides the physicians themselves, and I must say our good wives, can ever realize the great self-sacrifice that exists in our profession. We alone it is who know that the air castles we build must be dark to many an Alpine summit here amid Italian skies. We wage continuous warfare, not the war of bloodshed and the carnage of battle, but the war against pestilence and disease. On these occasions there is a potentiality among us that can make us even renew the very civilization of our state. I mean by this that the very citizenship of our state depends upon the physical ability of its sons and its daughters, and who but the physicians have charge of this condition? Rather would I have you realize, fellow physicians, that there are no greater, grander, truer men than those who exist within our ranks, and I would have you feel and know that we should never forget even the names of those who have added anything in the way of scientific research to the pages of medical history. "Peace hath her victories no less renowned than war." The ravages of diphtheria and smallpox; the oncoming abatement; the ravages of tuberculosis; the discovery of ether and chloroform anesthesia, have done more to prolong life, to abate human misery, to increase the wealth of nations, than all the labors of earth's most powerful potentates. Every battle has its heroes, all perilously calling after theirs. In the profession to which we have the honor to belong today they are unnumbered; so many that those who fall today obscure with

their fame the dead of yesterday. No towering shaft or separate window proclaims to posterity their deeds. It is well we can on an occasion like this speak of our profession and tell the story to listening ears. It is well sometimes to speak of the glories of our past and the prospects of our future. Coming generations will only know us by the imprint we have made upon the pages of medical history.

I am reminded of an essay by that brilliant historian, Froude, who has written in reference to the valorous deeds of Raleigh, of Sir Richard Granville, who made England famous, the title being "England's Forgotten Worthies," and how well does this apply to our own profession; not forgotten by you, fellow practitioners. Their names, some of them at least, are as familiar to you as household words, but the records of their deeds are sealed books, never opened save by ourselves, and to many even their names are unknown.

There are two armies, the one with splendid trappings and brilliant banners flaunting in the breeze, with gold-bedecked officers, when danger is threatened, with men whose faces gleam with forced delight of victory or darken with defeat, sweeps over the land amid the horrid sounds of shouting voices and the rattling of the musketry and the thunder of roaring guns. The dust it makes darkens the very atmosphere, and the ground is shaken beneath the rushing squadrons. It pauses and in its wake the green fields are blackened; the clear streams are blackened with long, dark streaks of blood, and all nature is unhappy. A thousand voices are hushed by the cries wrung from the parched lips of mangled forms that once were men. The other host comes with so stealing tread you scarce notice their advancement. It is the men of sober mind, their faces grave and set; here and there upon some brow the deeper lines, the whiter hair, with the same calm countenance, the sadder eye, mark alone the presence of a leader whose lifework and whose daily poise perhaps for years, perhaps in many lands, is death. And yet they are the real victors of the world. Nations are proud to rear monuments of brass and of marble to the very skies. Their names are often forgotten, but, fellow members, shall we forget their names. Shall we forget Battey, that proud son of Georgia? Shall we forget J. Marion Sims, who has done so much in the field of gynecology, knighted by

the crowned heads of Europe and revered by every Southern physician? Shall we forget Crawford W. Long, the discoverer of ether anesthesia, whose lifework was done among the old red hills of Georgia? Has Jenner been honored by the world for the work that he has done? Does Harvey, does Hunter only live in the pages of medical history? All honor to the men of war, strewing their pathway with every token of a nation's gratitude and after death let some towering shaft forever point to coming generations of their race how sweet and noble it is to die for one's country. To the physician, the hero, none of this belongs. His only reward is the consciousness of a duty well performed. His only monument is a place, an enduring place, in the hearts of his confreres.

But, my fellow physicians, I have strayed away in a reminiscence mood. Forgive me for trespassing upon your time, but I have long felt not only the medical profession of our state, but of all states, has not realized the place it occupies in the nation's and states' activities, be it political, secular, religious, medical or otherwise. Now is the time we should assert ourselves. Now is the time we should let the people know that we are a power in the state. (Applause.)

We are glad to see you with us this morning and to look into your smiling faces. Atlanta is noted for its hospitality even to strangers, but you are brothers in the profession and as such we extend to you the glad hand of welcome. Throw away your cares and for three days let your minds and your feelings lead you only to pure water and into the valley of fraternal sociability. We want you to know that professional courtesy is not lacking among the physicians of Atlanta. To each and to all the medical profession of Atlanta extends a most cordial greeting and a most cordial welcome. (Loud applause.)

Response by Dr. J. Lawton Hiers.

Mr. President and Members of the Medical Association of Georgia: When I was requested by our President to respond to the very eloquent addresses to which we have just listened with so much pleasure and delight, I accepted it as a signal honor, and I want to assure you that we are delighted to be with you.

Since I reached Atlanta, I have been beset by many friends to know what I in-

tended to say to you boys. I told some of them I expected to tell you that I am glad I am a Georgian. (Applause.) I am glad I was born in Georgia, and that I am glad I was born young and that I expect to remain young as long as I live. (Laughter.) Furthermore, I am glad that I am a member of this grand old medical association. (Applause.)

Now, ladies and gentlemen, with all of this to be proud of, just think how much more it means to be a Georgian and a real Atlantan combined. (Applause.) By this I am reminded of a saintly Savannahian who died and went to his happy reward. When reaching the gates of the Holy City he was admitted by St. Peter, and after strolling around the streets for a while, he observed both men and women shackled in chains. Being horrified at the sight, he rushed back to St. Peter to know why it was people should be wearing chains in Heaven, and St. Peter in his most gracious manner informed him that the people he had seen in chains were Atlantans, and that he was supposed to keep them chained or they would surely go back to Atlanta. (Laughter and applause.)

Fellow members, I would ask that you re- of one's love for the home city, and though it may be accepted in jest, it is an undisputed fact that it has been only by the united efforts and undying loyalty of your Atlantans that has built for you the wonderful city that you have. (Applause.)

Fellow members, I would ask that you review with me the roster of this society from its foundation to the present from which I will quote only a few names: Louis P. Ford, Henry F. Campbell, Georgia's first president of the American Medical Association; Crawford W. Long, the father of anesthesia; Louis A. Dugas, whose advocacy of antiseptic surgery antedates that of the immortal Lister; Richard D. Arnold, the first to make a systematic study of yellow fever; Robert Battey, Westmoreland, Richard J. Nunn, and last, but not least, Abner W. Calhoun, around whose name sacred memories cluster. The bare mention of them is sufficient to lift us to a higher plane of thought and of sentiment. Inspired by their love for the science of medicine, and the desire to more fully cultivate the spirit of fraternalism and brotherly love, and the necessity for a more united effort, this society was organized at Macon, Georgia, sixty-five years ago, and we are here today to pledge ourselves one to the

other our best efforts for the continuation of the noble work so ably begun by the charter members of this organization. I am sure I voice the sentiments of every one present when I extend to you our high appreciation of the cordial welcome you have extended to us. To many of us who have been so fortunate as to have been your guests before, we have known and are familiar with your hospitality in by-gone days. We have had the honor to meet and to admire many of your fair women. We have admired your beautiful homes, your beautiful streets and parks, your great aggregation of manufacturing enterprises, your stately and magnificent buildings, both public and business, all indicating great wealth and a unanimity of purpose. Now, my good friends, for all that you have offered us in your splendid and eloquent greeting; for all the pleasures we shall anticipate, and for the delightful memories that will linger and linger and follow us to our homes, I extend to you in the name of this Association our sincere thanks. (Loud applause.)

The Secretary read the minutes of the House of Delegates.

Dr. Hiers moved that the report be adopted.

Motion seconded and carried.

Dr. Stewart R. Roberts, Chairman of the Committee of Arrangements, reported for the committee. He urged that members register as soon as they arrived. This was very necessary, as all members would receive a card which would serve as a ticket for admission to the dinner to be given by the members of the Fulton County Medical Society Thursday night.

He said there would be a session this afternoon, and another one tonight at 8:30.

The Capital City Club has granted the privileges of the club to the members of the Association. The University Club invites the members of the Association to visit it and extends to them its privileges.

The exhibitors should be extended every courtesy, and he expressed the hope that every member would visit the exhibit room.

Dr. Claude A. Smith, Atlanta, read a paper entitled "The Value of Fresh Air in Preventive Medicine," which was discussed by Dr. Thrash, and in closing by the author of the paper.

Dr. L. C. Allen, Hoeshton, read a paper on "Some Work for Georgia Doctors."

This paper was discussed by Drs. Richard-

son, Clark, Chason, McArthur, Avant, and in closing by the essayist.

Dr. Pileher moved that all of the papers which needed lantern slides be read this evening. (Papers of Drs. Hodgson, Hoke and Jones.)

Motion seconded and carried.

Dr. W. L. Champion, Atlanta, read a paper entitled "Suprapubic Prostatectomy."

Dr. M. L. Boyd, Atlanta, read a paper on "Chronic Prostatitis."

These two papers were discussed together by Drs. Harrold, Jones, Carter, and in closing by the essayists.

On motion, the Association adjourned until 2:30 p. m.

First Day—Afternoon Session.

The Association reassembled at 2:30 p. m. and was called to order by the President.

Dr. A. L. R. Avant, Savannah, read a paper entitled "Means and Methods That Should Be Used to Increase the Longevity of Man," which was discussed by Drs. Hodgson, Allen, Harrold, White, and Dean.

Dr. E. C. Davis, Atlanta, read a paper entitled "My Experience in the Use of Anoci-Association Anaesthesia During the Past Year," which was discussed by Drs. Harrold, Branch, and in closing by the author of the paper.

Dr. Julian C. Pate, Valdosta, read a paper on "Oil-ether Anesthesia," which was discussed by Dr. Allen, and in closing by the essayist.

Dr. Baxter Moore, Atlanta, read a paper entitled "The Management of Pregnancy and Normal Labor." (No discussion.)

Dr. Archibald Smith, Atlanta, followed with a paper on "High Forceps and Cesarean Section," which was discussed by Dr. Harrold and in closing by the author of the paper.

Dr. Everard A. Wilcox, Augusta, read a paper entitled "Hypernephroma," which was discussed by Dr. Branch.

Dr. J. E. Paullin, Atlanta, read a paper entitled "Treatment and Mortality of Cerebrospinal Meningitis," which was discussed by Dr. Roberts.

Dr. C. C. Harrold, Macon, read a paper on "Whitman's Method of Treating Fractures of the Hip."

Discussed by Drs. Chason, Hoke, Hodson, and discussion closed by the essayist.

On motion the Association adjourned until 8:30 p. m.

First Day—Evening Session.

The Association reassembled at 8:30 p. m. and was called to order by the President.

Dr. Michael Hoke, Atlanta, demonstrated bone and joint cases by numerous slides and motion pictures.

Dr. Fred G. Hodgson, Atlanta, read a paper on "Posture of the Human Body in Its Relation to Health and Efficiency," which was illustrated by several slides and motion pictures.

Dr. E. G. Jones, Atlanta, read a paper entitled "Some Points of Practical Interest Relating to the Goiter Question," with lantern illustrations.

Dr. Hoke's paper was discussed by Dr. Harrold, and Dr. Hodgson's paper by Dr. Houston, after which Dr. Hodgson closed the discussion.

Dr. T. R. Wright, Augusta, read a paper entitled "The Importance of the Work Being Done by the State Sanitarium," which was discussed by Drs. Cranston, Jones, Allen, and in closing by the author of the paper.

Dr. W. R. Houston, Augusta, read a paper entitled "Cerebrospinal Syphilis."

Dr. Hansell Crenshaw, Atlanta, read a paper on "Psycho-Analysis."

These two papers were discussed together by Drs. Gaines, Cranston, Niles, King, and discussion closed by the authors of the papers.

On motion, the Association adjourned until 9 a. m. Thursday.

April 16—Second Day—Morning Session.

The Association met at 9 a. m. and was called to order by Vice-President Chason.

Dr. Robin Adair, Atlanta, read a paper entitled "The Medical and Surgical Aspect of Oral Hygiene and Pyorrhea," which was discussed by Drs. Coleman, Chason, Avant, Rhodes, McRae, Charlton, Niles, Clark, and in closing by the essayist.

Dr. W. A. Mulherin, Augusta, read a paper on "The Use of Protein Milk in Diarrhoeal Diseases of Infants," which was discussed by Dr. Clark and in closing by the essayist.

Dr. C. A. Rhodes, Atlanta, followed with a paper entitled "A Few Statistics on the Present Status of Pediatric Teaching in the Sixteen Southern States Forming the Southern Medical Association," which was discussed by Dr. Mulherin.

Dr. A. G. Fort, Atlanta, read a paper entitled "Report of the Work Done Towards

the Eradication of Hookworm Disease in Georgia."

Discussed by Dr. McArthur.

Dr. J. E. Sommerfield, Atlanta, read a paper entitled "An Acquired Case of Morbus Ceruleus in an Adult."

Dr. Allen H. Bunce, Atlanta, followed with a paper entitled "An Experimental Study of the Aberhalden Test," which was discussed by Dr. Cranston.

Dr. M. A. Clark, Macon, read a paper on "Ethics," which was discussed by Drs. Dean, Slaek, Charlton, Davis, and discussion closed by the essayist.

Dr. E. C. Thrash, Atlanta, read a paper on and demonstrated a "Method of Producing Artificial Pneumothorax." Discussed by Dr. Harris, and in closing by the author of the paper.

Dr. E. E. Murphey, Augusta, read a paper entitled "The Menace of the Laboratory," which was discussed by Drs. Houston, Hardman, Little, Burdette, Oertel, Bunce, Kime, Gould, and discussion closed by the author of the paper.

Dr. George M. Niles, Atlanta, read a paper entitled "The Present Status of the X-Ray in the Diagnosis of Gastrointestinal Conditions."

Discussed by Drs. Derr, Crenshaw, Jones, and in closing by the essayist.

Dr. H. J. Williams, Macon, followed with a paper entitled "A Study of Gaseous Edema," which was discussed by Drs. Davis, Goldsmith, Branch, and in closing by the essayist.

On motion, the Association adjourned until 2:30 p. m.

Second Day—Afternoon Session.

The Association reassembled at 2:30 p. m. and was called to order by Vice-President Chason.

Dr. Cosby Swanson, Atlanta, read a paper entitled "The X-Ray in the Treatment of Skin Cancer."

Dr. Cecil Stockard, Atlanta, read a paper entitled "Convenient Face Shield for Nose and Throat Work."

Discussed by Dr. Roy, and discussion closed by the author of the paper.

Dr. Dunbar Roy, Atlanta, read a paper entitled "The More Rational Methods of Treating Aural Diseases," which was discussed by Drs. Lokey, Hiers, Baird, and in closing by the author of the paper.

Dr. R. M. Nelson, Atlanta, read a paper

entitled "Mastoid Operation Without Artery Forceps or Ligatures."

Dr. A. B. Mason, Waycross, followed with a paper entitled "First Aid to the Injured Eye," which was discussed by Drs. Maxwell, Stirling, and in closing by the essayist.

Dr. A. W. Stirling, Atlanta, read a paper entitled "Tobacco Amblyopia," which was discussed by Drs. Martin, Maxwell, Stockard, and in closing by the author of the paper.

Dr. G. P. Huguley, Atlanta, read a paper entitled "Report of Two Cases Presenting Symptoms of Mucous Colitis; (a) Resection of Hepatic Flexure of Colon; (b) Colectomy (Lane's Operation)."

Dr. Will H. Malone, Marietta, read a paper entitled "Headaches."

Dr. H. H. Martin, Savannah, read a paper on "The Sluder Tonsil Operation," which was discussed by Drs. Daly, Lyle, Stapler, Smith, and in closing by the essayist.

On motion the Association adjourned until 9 a. m. Friday.

April 17—Third Day—Morning Session.

The Association met at 9 a. m. and was called to order by the President.

The Secretary read the minutes of the House of Delegates.

Dr. Pilcher moved that the minutes be adopted as read.

Motion seconded.

Dr. F. W. McRae stated that the Constitution of the American Medical Association provides that delegates shall be elected for one and for two years; that they shall be equally divided between one and two years, so that electing a delegate for six years would be in conflict with the Constitution of the American Medical Association. Any delegate elected to the American Medical Association, whose services were found to be satisfactory to the Association, could be re-elected from year to year. It was very essential to elect a delegate who would attend the meeting of the American Medical Association.

Dr. Charlton pointed out the importance of selecting a man as delegate to the American Medical Association who would go, and if thought wise, he could be re-elected from year to year.

Dr. W. W. Pilcher heartily concurred in the remarks of Dr. Charlton and also Dr. McRae, and only a man who could go to the meeting should be elected a delegate to the American Medical Association. A man

could be elected delegate for two years, with the understanding that if he is a good man the Association can continue to re-elect him for six years.

Dr. M. A. Clark said there was nothing in the Constitution of the American Medical Association to prevent the State Association from re-electing the same delegate or delegates year after year.

After further discussion by Drs. Coleman and Allen, the motion to adopt the report of the House of Delegates was put and carried.

Dr. R. R. Kime, Atlanta, read a paper entitled "Fulminating Appendicitis; the Surgical Technic and After Treatment," which was discussed by Drs. McRae, Charlton, Harold, Chason, McDuffy, and discussion closed by the author of the paper.

Dr. W. F. Shallenberger, Atlanta, read a paper entitled "Perineal Hernia," which was discussed by Drs. Coleman, Hartley, Charlton, Kime, and in closing by the essayist.

Dr. Willis Jones, Atlanta, read a paper on "Surgical Indigestion," which was discussed by Drs. Nicolson, Battey, Kime, Campbell, and in closing by the essayist.

Dr. W. B. Hardman, Commerce, read a paper on "The Medical Gospel of the Twentieth Century," which was discussed by Drs. Kime, Pilcher, Davis, Allen and Clark.

Dr. Pilcher offered the following resolution.

Resolved, That the Medical Association of Georgia hereby tenders its thanks and congratulates the Committee on Arrangements and the Fulton County Medical Society on the omission of whiskey, wines, and other intoxicating drinks in their banquet at Hotel Ansley last night; this being an innovation which we hope will establish a precedent to be followed in future by other entertainment committees.

It was moved that the resolution be adopted.

Motion seconded.

Dr. Dean said he had been a member of the Association for more than a quarter of a century, and therefore he was one of the oldest members thereof. He had been a pretty constant attendant at these meetings and had been fairly observant, but he had never attended during all these years a meeting of the organization when everything passed off so expeditiously and in such a business-like manner.

The Chair then put the motion to adopt the resolution offered by Dr. Pileher and declared it carried.

Vice-President Chason took the chair and President Lattimore delivered his address.

At the conclusion of the address, Dr. F. W. McRae offered the following resolution:

Resolved, That the members of the Medical Association of Georgia express their appreciation of the work of the President, Dr. Lattimore, who has given of his time and energy and money to the Association for what has been accomplished in legislation in the Senate and House, namely, the passage of our Medical Practice Bill. Without our President as leader, it would have been impossible to have done it. All honor to the gentlemen he has named in his address who served on the committees, and who did such splendid work, but Dr. Lattimore was too modest to mention himself, and this Association and the people owe to our retiring President a debt of gratitude for the able and valuable work which he did, as well as for the manner in which he has expedited the business and for his able and graceful presidency of this Association.

The resolution was seconded and adopted unanimously by a rising vote.

The President: It gives me great pleasure to use the recess time for what I consider of interest to this Association, and I am going to call on a few of our men and enthusiastic workers to talk about the Vital Statistics Bill, the Medical Health Bill, and anything else that may be of vital importance to the Association. (Applause.)

Remarks were made on the subjects mentioned by Drs. Stewart R. Roberts, W. W. Pileher, T. J. Charlton, F. W. McRae, L. C. Allen, J. D. Chason, Richardson, Dean, Clark, Williams, Hiers, McArthur, Martin, Coleman and Farrell.

Dr. Stewart R. Roberts offered the following resolution, which was seconded by Dr. Coleman:

Resolved, by the Medical Association of Georgia, That the Public Health Bill be and hereby is unanimously endorsed; and that the Committee on Public Policy bring this resolution and bill to the attention of the legislative session in 1914.

Dr. Pileher said it would be desirable to have Messrs. Ellis, Allen and others interested in the two bills—the Public Health Bill and the Vital Statistics Bill—get together and see if the salient points in the two

bills could not be incorporated in one bill. He would offer that as an amendment.

Dr. Roberts accepted the amendment.

Dr. Coleman suggested that the matter be left to the authors of the two bills.

Dr. Allen stated that the two bills were now on the calendar and would come up at the next session of the legislature, and to condense the two bills into one would not be feasible.

Dr. Charlton moved as an amendment that the Association concentrate its work on the Vital Statistics Bill. Seconded.

The President thought the matter had better be left with the Committee on Public Policy and Legislation to see if the two bills could be combined.

Dr. Dean offered the following as a substitute for the other motions:

Resolved, by the Medical Association of Georgia, in convention assembled, That we most heartily endorse the two bills introduced into the last session of the state legislature, one by Dr. L. C. Allen and known as the Vital Statistics Bill, and the other by Mr. R. C. Ellis, and known as the Public Health Bill.

Resolved, further, That recognizing the great value such legislation would be to the people of our state, we respectfully but earnestly urge our senators and representatives at their next session to place either these bills, or very similar legislation, on the statutes of Georgia.

The substitute was seconded by Dr. Clark, accepted, and on being put to the House was declared adopted.

On motion the Association adjourned until 3 p. m.

Third Day—Afternoon Session.

The election of officers being the first thing in order, the President appointed as tellers Drs. Smith, Hiers, Pileher and Davis.

The balloting resulted in the election of the following officers:

President, Dr. W. B. Hardman, Commerce; First Vice-President, Dr. C. L. Williams, Columbus; Second Vice-President, Dr. F. D. Patterson, Cuthbert; Councilors, First District, Dr. J. Lawton Hiers, Savannah; Second District, Dr. A. D. Little, Thomasville; Third District, Dr. V. O. Harvard, Arabi; Fourth District, Dr. H. W. Terrell, LaGrange; Ninth District, Dr. J. H. Downey, Gainesville; Delegate to the American Medical Association, Dr. E. C. Davis, Atlanta; Alternate, Dr.

F. W. McRae, Atlanta. Place of meeting, Macon, 1915.

Dr. Branch offered the following resolution:

Resolved, That the thanks of the Medical Association of Georgia be extended to the profession and people of Atlanta for their courtesy and charming hospitality; also that our thanks be extended to the officers of the Wesley Memorial Church for this beautiful hall in which we have held our sessions.

The resolution was seconded and adopted by a rising vote.

On motion the chair appointed Drs. Hiers and Pilcher to escort the newly elected President to the platform.

Dr. Hartman was received with great applause, and in accepting the presidency said:

Members of the Medical Association of Georgia: I appreciate more than I can tell you the honor you have conferred upon me. It is a distinguished honor to be President of this Association. The profession of medicine today is the greatest profession known to man; I will not hardly accept the ministry, because our work is becoming so varied and so magnanimous in every respect that we ought to try to make it the greatest profession on earth, and I think the time is coming when it will be second to no profession on earth. I certainly appreciate this honor more than any honor I have ever received. The pinnacle of my ambition is reached when I reach the Presidency of an Association of which I am a member, and that is the greatest honor doctors can confer upon any doctor in the state. I appreciate it very much. Again, I thank you for this great honor. (Loud applause.)

Dr. Clark moved that a rising vote of thanks be extended to the retiring President, Dr. Lattimore, for the able manner in which he has presided.

Motion seconded and carried unanimously.

As there was no further business to come before the meeting, on motion the Association then adjourned to meet in Macon in 1915.

PROPAGANDA FOR REFORM.

Valentine's Meat Juice.—Four years ago an examination by the Council on Pharmacy and Chemistry showed that Valentine's Meat Juice was not a meat juice, but had the character of a meat extract instead, while on the

basis of the claim that it was a meat juice extravagant assertions as to its nutritive value were made. The product being a meat extract, was practically devoid of nutrient qualities. As Valentine's Meat Juice is still widely advertised the Council deemed a re-examination important. This re-examination shows that in general it has the composition now as then, and that the same unwarranted claims are still made for it. (Jour. A. M. A., May 2, 1914, p. 1419.)

Lower's Germen Prescription.—This "consumption cure," hailing from Marion, Ohio, is sold under the claims: "The most Deadly Foe to the Great White Plague—Tuberculosis—Science Has Yet Produced." "It takes from 15 to 30 large bottles of Germen Prescription to remove the tuberculosis poison," each bottle costing the victim two dollars. The composition of the nostrum is purported to be (in bastard Latin): "Herb Menthaepeperitae, Herb Marrubium Vulgarae, Ex Balsanum Tolutonum, Herb Hydrastis Canadensis, Scillae Maratinia, Mentholis, Ex Virginiana Prunus, Ex Capsici Fastiagatum." An examination made in the A. M. A. chemical laboratory indicates that whatever therapeutic virtues this peppermint-horehound-cayenne pepper-menthol mixture possesses are due to the 1.83 gm. menthol per 100 c.c. which it contained. About the only effect produced by the mixture will be to derange the digestion of the person taking it. (Jour. A. M. A., May 2, 1914, p. 1418.)

Pituitary Extract.—The use of pituitary extract as an oxytoxic must be considered in the experimental stage. A large number of cases have been reported in which untoward effects from the use of various pituitary extracts (including pituitrin) were obtained. (Journ. A. M. A., May 2, 1914, p. 1420.)

Pancreatin.—Long and Buhleman report that mere traces of hydrochloric acid will destroy the ptyalin of pancreatin, that pancreatin of commerce—which often is not pancreatin but merely the dried pancreas gland—is practically devoid of lipase, the fat digesting ferment, and that its tryptic ferment is likely to be destroyed by the action of the pepsin and hydrochloric acid during its passage through the stomach. (Arch. Int. Med., Feb. 1914, p. 314.)

The Okola Laboratory.—The postmaster general has issued a fraud order against the

Okola Laboratory, Inc., Rochester, N. Y., which sold a mail order treatment for weak eyes. The "laboratory" advertised that Dr. John L. Corish, "an able New York physician" and "an eminent medical man," had discovered a marvelous treatment for affections of the eye by which those who were wearing glasses or who should have been wearing glasses would do without them. The treatment consisted of three parts. Okola was the name of some tablets proven by the government to consist of baking soda and boric acid. The Okolator was a metal inhaler containing cotton moistened with a volatile liquid. The Okolizers were printed cards giving instructions for rubbing the eyes, etc. (Jour. S. M. A., May 9, 1914, p. 1492.)

Pa-pay-ans (Bell) now Bell-and.—Bell & Co. announce that Pa-pay-ans (Bell) is in the future to be known as Bell-and. An examination of Pa-pay-ans (Bell), made by the Council on Pharmacy and Chemistry, having failed to demonstrate the presence of papain, it is probable that the change of name was decided on to escape prosecution for misbranding. (Jour. A. M. A., May 9, 1914, p. 1492.)

Bromidia (Battle & Co.)—A report of the Council on Pharmacy and Chemistry points out that while the name suggests bromid, Bromidia is essentially a chloral preparation. This nostrum illustrates the need of the Council's rule under which recognition is refused to pharmaceutical mixtures whose name does not indicate their most potent ingredients. While the chloral content of Bromidia has been given considerable publicity, yet the preparation is used both by physicians and by the public, without due consideration of its potent ingredient, as attested by the fatal results and the habit-formation which have resulted from its use. The Bromidia advertising propaganda first admits the presence of chloral, then it is argued that in Bromidia the evil effects of chloral are eliminated and in the end the impression is left that Bromidia is practically innocuous and may be given even in cases of typhoid and to children. (Jour. A. M. A., May 16, 1914, p. 1573.)

Monte Cristo Rum and Quinin for the Hair. The government chemists found this preparation to contain ethyl alcohol, wood alcohol and a trace of quinin. The manufacturers were found guilty of adulteration and mis-

branding the preparation. (Jour. A. M. A., May 16, 1914, p. 1575.)

Pepsin Magen Bitters.—The government chemists found this preparation to contain only a trace of pepsin. The preparation was declared misbranded. (Jour. A. M. A., May 16, 1914, p. 1575.)

Bavarian Malt Extract.—The government chemists proved that this was not a malt extract coming from Bavaria, but instead was beer. The product was declared misbranded. (Jour. A. M. A., May 16, 1914, p. 1575.)

Thiocol Re-admitted to N. N. R.—In 1913 the Council on Pharmacy and Chemistry directed the deletion from New and Nonofficial Remedies of Thiocol and Syrup Thiocol, Roche, because a preparation called Sirolin, containing Thiocol as its effective component and practically the same as Syrup Thiocol, Roche, was being advertised to the public. The Hoffmann-LaRoche Chemical Works having furnished assurance that the public exploitation of Sirolin has been discontinued, the Council voted that Thiocol and Syrup Thiocol, Roche, be restored to New and Nonofficial Remedies. (Jour. A. M. A., May 23, 1914, p. 1637.)

Antimeningitis Serum.—The untoward or fatal effects sometimes following the use of antimeningitis serum are probably due to the toxic action of the preservative contained in it or to increased intracranial tension due to its administration. The technique of its employment should be improved rather than its use abandoned. The dangers which may arise from its use are not to be feared as much as the disease itself. (Jour. A. M. A., May 23, 1914, p. 1661.)

Liquid Petrolatum or "Russian Mineral Oil."—A report of the Council on Pharmacy and Chemistry points out that petroleum oil was used as a medicine by the ancients and that the product "liquid petrolatum" is now on the market under a host of proprietary names and is official in most pharmacopoeias. It was at one time used in the treatment of tuberculosis and as an adulterant of fats and oils on the assumption that it was assimilable. It is now known to pass the system unchanged and has recently been highly lauded as a particularly harmless laxative in the treatment of habitual constipation. As the U. S. P. definition of liquid petrolatum permits the use of rather widely varying prod-

ucts and as there is some difference of opinion whether a light or a heavy oil is preferable, the Council recommends that physicians desiring the water white, non-fluorescent (Russian) mineral oil use the term **petrolatum liquidum** grave or **paraffinum liquidum**, B. P., if the heavy product preferred by Sir F. Arbuthnot Lane is desired, and **petrolatum liquidum laeve** if the light variety is desired. (Jour. A. M. A., May 30, 1914, p. 1740.)

Cirkulon.—The device "Pulsocon" which Gerald Macauro has exploited widely in England, is sold in this country as "Cirkulon" by the "Cirkulon Institute" of Kansas City, Mo. Gerald Macauro, according to the Associated Press, has been sentenced in France to serve a term of three years' imprisonment on a charge of fraud. (Jour. A. M. A., May 30, 1914, p. 1742.)

MEETING OF OCMULGEE MEDICAL SOCIETY.

The Ocmulgee Medical Society held a very interesting session at Cochran last Tuesday. The following physicians were present: Drs. Stone, Sr., Stone, Jr., A. A. Smith and Brown from Hawkinsville; Herman and Wilkins from Eastman, and Maney from Chester.

The following papers were read and generally discussed: "High Calorie Feeding in Typhoid," by Dr. T. D. Walker, Jr.; "Pituitrin," by Dr. E. C. Brown; "Our Mistakes," by Dr. J. D. Herman.

The Society will next meet with the Twelfth District Medical Association at Eastman the latter part of June.—Cochran (Ga.) Journal.

ELECTED PRESIDENT OF BOARD OF HEALTH.

At the regular meeting of the city board of health last night Dr. Wedford W. Brown, for the past several years city bacteriologist and for the past year secretary of the board of health, was elected president pro tempore during Dr. Proctor's six months of absence.—Athens (Ga.) Herald.

To the lay mind the only good physician is the attendant; all those who have preceded are condemned by the patient or friends, and too frequently by the doctor in charge. Pittsburgh Medical Journal.

Dr. D. H. Parliment, of Conyers, arrived in the city last week and will make Covington his future home, where he will practice medicine. His office is located in the Star building and he and his wife will make their home at the Biggers House. Mrs. Parliment is at present visiting relatives in New Jersey.—Covington (Ga.) News.

The residence of Dr. R. P. Stinchcomb, at Lucile, was destroyed by fire about 2 o'clock last Friday morning. The doctor's family not only lost all their personal belongings and household goods, but in addition he lost his stock of medicines, surgical instruments, etc.—Blakely (Ga.) News.

Dr. C. G. Cate has moved his family to this place from East Chattanooga. They are pleasantly domiciled in a nice cottage on Rossville Road near Card Lumber Co.—Rossville (Ga.) Age.

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It is a wise doctor who knows his limitations; that is, who knows upon what subject he is well informed and is competent to express an opinion; and also upon what subjects he is deficient, and is frank enough to admit it and ask for a consultation.—Pittsburgh Medical Journal.

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AUGUSTA, GA., JULY, 1914.

No. 3

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THE MEDICAL GOSPEL OF THE TWENTIETH CENTURY.*

W. B. Hardman, M.D., Commerce.

The paper that I am about to read, I warn you in the beginning, is of no scientific value. You may as well know it now as to find out when I have concluded, a thing you do at the conclusion of many papers.

The article is mainly a little blow of the medical profession; and it is an ill wind that blows nobody good. Benjamin Franklin said, "A man who falls in love with himself will have no rivals," but I do not think this well spoken proverb will apply when we as a profession feel some just pride in the great modern achievements of medicine and surgery. In fact, their results are now so far reaching and their accomplishments on such a high plane that it is no longer irony to speak of the science of medicine and the art of surgery. To these the world now owes its priceless gratitude and unreserved loyalty.

Hippocrates, four hundred years before Christ, was the first doctor who began the clinical and scientific study of medicine and

gave to our profession its ethical ideas, and mapped out for the physician the high standard of manhood. Standing like a mighty pyramid in a vast desert, with his great learning, his scientific ideas, his lofty conception of the dignity of the true physician; all combine to stamp him as not only the father of medicine, but one of the greatest men of all time. From that far time to the beginning of the nineteenth century, with only now and then a bright light illuminating the dark and trackless ages of twenty-two hundred years, medicine has made but little real progress. Like many other things it was priest-ridden and ignorant ridden. Superstition, witchcraft, humbuggery and charlatanism had full sway. But little was known either of the cause of diseases or any rational remedy. Evil spirits were supposed to produce much of the sickness and certain prescribed rules of nonsense were laid down to get rid of these spirits. There was simply nothing tangible and stable in medicine. When any remedy of consequence was known it was given with the rankest empyricism. As I have just said here and there were a few bright men groping in the jungle of darkness for the true and scientific way; but they met with little encouragement and no remarkable success.

*Read at meeting of Medical Association of Georgia, Atlanta, Ga., 1914.

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THE MEDICAL GOSPEL OF THE TWENTIETH CENTURY.*

W. B. Hardman, M.D., Commerce.

The paper that I am about to read, I warn you in the beginning, is of no scientific value. You may as well know it now as to find out when I have concluded, a thing you do at the conclusion of many papers.

The article is mainly a little blow of the medical profession; and it is an ill wind that blows nobody good. Benjamin Franklin said, "A man who falls in love with himself will have no rivals," but I do not think this well spoken proverb will apply when we as a profession feel some just pride in the great modern achievements of medicine and surgery. In fact, their results are now so far reaching and their accomplishments on such a high plane that it is no longer irony to speak of the science of medicine and the art of surgery. To these the world now owes its priceless gratitude and unreserved loyalty.

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*Read at meeting of Medical Association of Georgia, Atlanta, Ga., 1914.

Yet here and there was set up a mile post of progress along this weary road of twenty-two hundred years.

In many ways the doctor in the development of the science of medicine has appealed to and gained the respect and reverence of the public. In other ways they have not. George Elliott, in "Middlemarch," gives a pretty good idea of how the doctor was regarded in the Georgian and Victorian ages. Dr. Lydgate and his superior family connections did not appeal to Lady Chettam in a doctor. She says, "One does not expect it in a practitioner of the kind." "For my own part, I like a medical man on a footing with my servants; they are oftener all the cleverer. I assure you I found poor Hick's judgment infallible. I never knew him wrong; he was coarse and butcher-like—but he knew my constitution." The same idea is sounded by Major Pendennis, who was horrified lest a lady marry her uncle's doctor. Today the doctor is considered, I think, an extraordinary good catch among the women.

All along through literature we find the doctor the object of satire and ridicule. Shakespeare says, "Throw physicks to the dogs," and some philosopher has added, "For the dogs will not eat it and are saved." No less a wise man than Benjamin Franklin says, "God cures and the doctor takes the fee." And many a consecrated clergyman in the ages past has thought his prayers did more in healing the sick than the medicine or surgery of the physician. Or if they grew a little doubtful of their prayers they knew the exact Becham pill or sarsaparilla that would do the work. How we have been taunted, too, by the old joke of the tombstone that covers the doctor's mistakes. But how many mountains of granite and marble would it take to cover the mistakes of the public, fanatics and legislatures who have persistently stood in the way of medical progress. **Up to the near present** the charlatan and quack, imposters, christian healers and patent medicine manufacturers—and every ilk and creed known to the supposed healing art—have received more consideration than the doctor, who is trying to be scientific and honest with the public, and follow the standard of manhood laid down by the immortal Hippocrates. The time has been when one needed no Aladdin's lamp with its magical powers to bring riches and fame. Simply make a patent medicine and call it Peruna or some such name, and advertise it to a

credulous public, or put your picture in the daily papers, claiming wonderful cures, and live in a mansion. Yet every quack and patent medicine man and impostor from Apolonius and Pirkens of Tyanna to the year of Our Lord 1914 has never left the true science of medicine one discovery worthy of record. A true disciple of Hippocrates is not simply a money grabber, and I will show you how this is true, when I tell you of the medical gospel of twentieth century. And yet almost every movement forward and upward by the men of true medical science has been looked upon with more or less suspicion and doubt by most law-making bodies, when not in a single instance, so far as laws are concerned for the betterment of humanity, has the medical profession failed the public.

By the beginning of the nineteenth century many men of rare mental gifts began the true scientific study of medicine. What a galaxy of bright stars arose in their splendor during the last 125 years and have left their impress upon the history of medicine and the world. Names by the score could be called whose discoveries have done more for humanity and the world's progress than all the men of Napoleon's type known to history. Jenner, Bright, Virchow, Cland Bernard, Pasteur, Koch, Klebs, Ehrlich, Reid, Lazier, Carroll, Long, Behring, Ross, Schaudinn and Lister, and a hundred other names may be called whose discoveries have saved human lives by the thousands and tens of thousands, and by so doing have added untold wealth to the world by preventing sickness and consternation to business by epidemics—epidemics of smallpox, the plague of "yellow fever," diphtheria and typhoid and typhus fever, which in ages past slew their millions and almost depopulated some sections of the world, are now no longer possible except in a very restricted way.

Reaching our present advancement in medicine the doctor now stands for something in the world and its progress, and all true physicians are working not simply for the money there is in it, but for the good of humanity. This is the main distinction between a physician and a quack.

What, then, is the gospel of the physicians of today? What is the medical gospel of the twentieth century? It is the gospel whose first great preachers were Jenner and Pasteur and their marvelous discoveries so permeated the world that others have taken

it up until some one has aptly said that "The most noticeable thing about recent medicine is the growth of co-operation and international solidarity, and the fact that nearly every important advance that has been made is prophylactic—that is, comes in the scope of preventing the occurrence, the recurrence or the spread of disease." The whole true profession is talking and working for this. It is the gospel that first originated hygiene. It is the gospel that calls for **drained** and **cleanly** cities; for fresh air and pure water, for pure and unadulterated milk for the use of the helpless infant. It is the gospel that vaccinates, immunizes and isolates communicable diseases and diligently fumigates after them. It is the gospel that calls for the examination of school children and demands better heating and ventilation for them. It is the gospel that condemns the sweat shop and unhealthy factory, and calls for sanitary privies and shoes to check the spread of hook-worm. It is the gospel that says, "Drain the swamps, swat the fly and screen the houses." It is the gospel that is seeking every means possible to control venereal diseases, to keep our women from the operating table, limiting blindness and lives with tainted blood. It is the gospel that is preaching temperance and scientific knowledge of eating as well as of drinking; for few die of hunger, "but of eating a hundred thousand." It is the gospel that fathered the pure food act and has worked under all kinds of discouraging circumstances to bring about salutary legislation; when congressmen and legislators looked at the propositions in a way to convince one that a cow or a horse was worth more than a human being. It is the gospel that really dug the Panama canal and made the names of Reid, Carroll, Ross and Gorgas go down in history right by the name of Goethals, for what can a man dig but a grave for men who are sick and dying? It is the gospel that asks for soap and water, sanitation, disinfection and quarantine. It is the gospel that is calling for eugenic laws, so that the creature of the future may be better specimen of manhood and womanhood: that there may be fewer inebriates and cripples, that our almshouses, hospitals, penitentiaries, chaingangs and asylums may have fewer inmates, and that our streets may be free of beggars and perverts. It is the gospel that has been instrumental in the formation of societies for moral prophylaxis,

that have made war on the white slave trade and have entered into settlement work with the hope of reclaiming the sexually perverted, the downcast and degraded, the poor and helpless. It is the gospel that says cut out an appendix at once when it becomes diseased and do not wait a week. It is the gospel that has fathered the medical practice bill and is calling loudly to our legislators for the public health and vital statistics bill. In short, it is the gospel that is crying every day from the medical profession of the world, "An ounce of prevention is worth a pound of cure." Not that we discredit the cure, for we are not therapeutic nihilists. But it is easier to flag a train and save a disastrous wreck than to allow the wreck and try to save the pieces, and bring order out of chaos. But to those who get sick we say, there is a balm in Gilead. Modern therapeutics has made great advancement also. All honor to such men as Behring, Ehrlich and many others who have given us such infallible and marvelous remedies; for the advancement in curing diseases in the past twenty-five years has been almost as remarkable as the prevention of them.

Do not these things above outlined stamp the modern doctor as the champion of preventive medicine? One whose ideas are scientific and not entirely personal, and forever free him from any mercenary accusation; for is he not helping to cut off his own income and means of maintenance in doing this?

Do you know of any other class of people who do likewise? Does the blacksmith sharpen your plow so that it may never grow dull again? Does the automobile man try to fix your machine so that you may never need him more? Like the Divine Master who said, "Whosoever drinketh of the water that I give him, shall never thirst again," so have the doctors of today been working with all their might to give to all men the literal water of life, so that during their years on earth they may never thirst again, nor come hither to draw.

The general public is either ignorant or unmindful of the vast benefit this twentieth century preventive medicine is to the world. Computed in dollars and cents its worth would mystify the most astute mathematician and astound the greatest financiers of the age. As a humanitarian and life saving proposition it beggars belief. In the next quarter of a century it will save more lives

than were ever killed in war since the world began; and yet the men who led the battles in war for killing thousands, have their likenesses standing in marble and brass in our public places; and men like Lazear, who died to prove his yellow fever theory and thus has saved thousands of lives, is scarcely heard of. All honor to old Georgia who thinks no statesman or warrior is more worthy to stand in the hall of fame than Crawford W. Long. May this spirit permeate the whole world!

Think how we have lived for centuries little knowing that the simple permeation of a thin coating of epithelium by certain insects produced our most deadly diseases. God knew their devastating power when he sent the lice and flies and no doubt the tick to cause the murraine in cattle when he was punishing Pharaoh. There is a blood sucking fly in Egypt, whose name, when literally translated, means "I eat and keep silence." In our midst is a blood sucking insect which has slain its millions, which, like *Casacarets*, "work while you sleep," which does not keep silence, but calmly sings its funeral dirge about our heads before giving us its lethal dose of poison. And then there is the harmless looking little house fly, a thousand times more deadly than the repulsive, ungainly spider which kills and eats him. Here he is—

Baby bye,
Here's a fly,
Let us watch him, you and I.
Up the wall
See him crawl,
Yet he always falls
In the milk.

Here he goes,
On his toes,
Tickling baby's nose
With his legs;
Dropping eggs,
If you please,
Brings disease
That will kill your Baby Rose.

Baby bye,
Here's a fly,
Let us swat him, you and I.

It fatigues the indignation of most physicians who come in contact with fanatics who are anti-everything along the line of preventive medicine. Take anti-vaccination societies and such nonsense. I wonder if they

know that in the Philippines the annual death rate from smallpox was 40,000 per annum until America vaccinated them, when it is now 300; and that the death rate from smallpox in Germany, the only country in the world where vaccination is absolutely compulsory throughout, is only three or four to one million inhabitants. Their vaccination now against typhoid is showing remarkable results.

But I must bring this article to a close, and as I was about to do so I opened my April number of the *National Geographic Magazine* and found there an article, "Redeeming the Tropics," by a man who is not a doctor, but has had his eyes opened to the value of preventive medicine. Every line of this article is pregnant with great truths and a feeling of unbounded gratitude for the marvelous achievements of twentieth century medicine. I will quote from this article two or three paragraphs which I am sure you will say are the best things I have read in your hearing:

"In these days when medical science has been recording one triumph after another over germ-produced diseases, when the germ-hunter in his laboratory has been ascertaining the cause of so many mysterious afflictions and laying the foundations for one preventive measure after another, people all but lose sight of the tremendous debt humanity owes to the expert in the experimental medicine and the sanitarium. Indeed, he would be a precise mathematician who could calculate what the vast amount of this debt is."

"When one contemplates what the heroes of medical science have made possible, and reflects that they have put into the hands of humanity powerful weapons of knowledge with which to combat our most deadly diseases, he cannot avoid feeling that their efforts will have been partially in vain unless all humanity is induced to aid in the work of capitalizing them."

"The world's death rate is probably about thirty per thousand. He who clips just one from that thirty saves more than a million and a half of lives a year. In a single quarter of a century the United States clipped five from its death rate, and if the world could only do as well in the next quarter of a century as the United States has in the past twenty-five years, a population equal to that of the Republic of China might be saved from premature graves."

"Surely such consequences challenge the

support of all mankind, and call for an army of volunteers who will go out into the world and preach to the people that cleanliness is next to godliness, and if it likes the power to produce life, it possesses the power to prolong it. Such a campaign would be fraught with enormous economic, geographic and humanistic consequences, but it would require long years of patient work. For if we in this enlightened America, with our boasted universal education and our splendid free institutions, cannot successfully combat such barbaric and unnecessary diseases as tuberculosis and typhoid fever, it certainly would be too much to expect that the ignorant masses of the tropical regions would accept and live up to these preachings in a few months."

"Abou Ben Adhem (may the tribe increase)
Awoke one night from a deep dream of peace,

And saw within the moonlight in his room,
Making it rich and like a lily in bloom,
An angel writing in a book of gold.

Exceeding peace had made Ben Adhem bold,
And to the presence in the room he said,
'What writest thou?' The vision raised its head

And with a look made of all sweet accord
Answered, 'The names of those who love the Lord.'

'And is mine one?' said Abou. 'Nay, not so,'

Replied the angel. Abou spoke low,
But cheerily still, and said: 'I pray thee, then,

Write me as one that loves his fellow-men.'
The angel wrote, and vanished. The next night

It came again with a great wakening light,
And showed the names of those whom love
of God had blessed.

And lo! Ben Adhem's name led all the rest."

DISCUSSION ON DR. HARDMAN'S PAPER.

Dr. R. R. Kime, Atlanta: I desire to endorse fully what Dr. Hardman has presented.

Another point I wish to add in regard to the paper and to emphasize is a little bit higher in the moral realm. I have stood for twenty years fighting along the line of sociology and along with that comes the higher moral realm which the physician should undertake as well as that of the treatment and prevention of disease. We as a class stand

for the higher ideal in life and we should not only talk of the physical condition and the prevention of physical diseases, but we should take an advance step which is bound to come and strive for a higher standard of the medical profession, and that is step into the moral realm which will have a greater moral effect upon humanity and upon the physician himself.

Dr. W. W. Pilcher, Warrenton: I have listened with a great degree of pleasure to the remarks of Dr. Hardman. As you all know, for years and years I have been connected in an official way with the Medical Association of Georgia. It has been a labor of love, and I am particularly and peculiarly gratified in the outcome of this meeting. In my meanderings over the state I have tried in a humble and feeble way to do some of the things that have been suggested by this paper and by these remarks. This is a great big world. We doctors should and ought to love one another better than we do. We should above and beyond all things be good men. The doctor literally covers the earth like the dew. We go into every nook and corner, every crack and crevice of this great state of ours. The doctor gets closer to his patients and to the people than the preacher himself.

I am glad to see that a healthy moral sentiment is now permeating the Medical Association of Georgia, and I want to take this occasion here and now to say with all my heart, and I am sure I voice the sentiment of the vast majority of the medical profession of Georgia when I say that we congratulate the Fulton County Medical Society that they had the manhood in this great city to have a banquet and eliminate whiskey, wine and beer, and all other intoxicants. Every doctor has the right to drink whiskey, and I am sorry that it is that way, but if you will drink on an occasion like this, go to your club or go to your room. I am not a fanatic on the subject of prohibition, but God knows I love the moral sentiments of the medical profession, because we are gentlemen, by virtue of the fact of our position, looked upon as leaders throughout the country, and before I take my seat I should like from the first county that ever had local option in the State of Georgia, to say that we had a man there who never had an opportunity to go to school, but he gave the best definition of a bar-room I have ever seen. You can

look in all your encyclopedias and dictionaries, and you cannot get a definition comparable to it. His definition is this: "A bar-room bars out everything that is good, and there is room enough for everything bad."

Dr. E. C. Davis, Atlanta: We have listened to the words of wisdom and the matchless eloquence of the speakers who have preceded me, and it were presumption in one less gifted to attempt to address you. It is always a pleasure to me to meet with brother physicians, and I assume this opportunity a privilege indeed for the prestige of this great old society extends beyond the confines of the state. When I observe the personnel of this gathering, I am not only gratified but proud that I, too, am a member of this organization; proud of its time-honored traditions and of the splendid spirit of scientific progressiveness so manifest throughout our ranks. But we must remember that the life of an organization and its ultimate crowning success depends upon both individual and concerted efforts, and while the proceedings witnessed by those who attend these gatherings may and do leave their impress upon us, it is through association in after days with each other as brother physicians that we derive the greatest benefit from coming together here this week. There comes to us the young physician with mind and heart plastic, receptive, attentive, and an aspirant for our honors and for our confidence, and with an earnest desire for a closer fellowship with a firmer belief in his profession. Let us show that young man by words and deeds that we do care whether he becomes a success or a failure, and we will help to mold character and shape human destiny.

Dr. L. C. Allen, Hoschton: I have always had a high appreciation for the medical profession. I have always loved my fellow physicians, but I want to say that I shall go home from this meeting with a higher opinion of the medical profession of Georgia. I think this meeting will make us all better doctors and better men, and I believe that the time and the expense we have gone to in coming to this meeting will repay us manifold.

I congratulate the essayist on his most excellent paper, and I further congratulate the association on having the privilege of hearing it.

Dr. M. A. Clark, Macon: I congratulate the essayist on the title of his paper. We are told gospel means good news. It is in-

deed good news to hear such expressions as have been made by the profession today. It is indeed good news to hear such encouragement and to see such evidence of the high plane upon which our profession is getting. It is thoroughly gratifying to see that we are all trying not only to approach the higher life, but to set an example, and I rise to commend what has been said, and like Brother Allen who has preceded me, I shall go home glad I was here at this meeting; I shall go home proud of my profession.

While I am on my feet I will suggest, if you will pardon the suggestion, one other important improvement in our banquets. It is certainly gratifying to me we had such a successful, such a delightfully charming occasion the other evening, and without any of the alcoholics. Now, if at our next banquet we may have a little different tenor in our jokes it will make me glad and others glad, and I am sure all of us will be glad because it will be an inspiration to better things. If you want to tell funny jokes of a questionable nature, do so in private, but let us not give publicity to them, as it makes us as a profession misunderstood. Let us continue on that higher plane by example as well as precept.

It is not to be expected that an ignorant laity should know what is true and what is false in medical advertisements that appear in the daily press; but there is no doubt that the editor of the paper knows what is true or false, and whether he is permitting an advertisement to appear in his paper that will deceive people and thus rob them of their money that he might get part of the blood money for his ad.—Pittsburgh Medical Journal.

It is quite a common remark for a patient suffering from a chronic condition to state that you are the sixth physician he has consulted. You must conclude that you will soon be No. 7 and he will be looking for No. 8.—Pittsburgh Medical Journal.

The more money The Journal of the Medical Association of Georgia makes out of its advertisements the less it costs the State Association to run the paper. This means that every member of the State Association has an interest in the advertising columns. If one business firm advertises and another does not, patronize the one that does. It is money in your pocket.

ETHICS.***M. A. Clark, M.D., Macon, Ga.**

It has been nearly twenty-four centuries since Hippocrates, the father of medicine, said: "Medicine is of all arts the most noble, but owing to the ignorance of those who practice it and those who inconsiderately form a judgment of them, it is at present far behind all other arts." We may remark without fear of contradiction that marvelous advancement has been made by those who practice our art today; but we fail to find evidence of much improvement in those who inconsiderately form judgment of us. It is sad but true that the laity know less of medicine than of any of the professions, and, strange to say, they show less inclination to learn more concerning the true practice of our profession. How much the profession are responsible for such ignorance, it is not the province of the writer to discuss on this occasion.

When we study comparatively the words of Hippocrates, we find that marked improvement has been made in every phase of medicine as a science and art except the ethics of the profession. Nothing seems to so mystify the public as medical ethics and the very mention of "doctors' ethics" causes such consternation that they gaze at you in wonder and wait resignedly for something awful to happen. This ignorance is very largely due to the lack of proper observance of true ethics on the part of the members of our profession. While few of us are willing to admit an ignorance of the niceties of the teachings and practice of ethics, yet it is really true.

When you recall that even in the present day of advanced teaching and great facilities for learning the physician is ushered into the great arena of life without having had any instruction in ethics, or even mention of it, except perhaps what he may remember of the Hippocratic oath, which he may have been required to take on the day of graduation, it is no wonder that the young disciple of Aesculapius enters the practice of medicine without any knowledge of his true attitude toward his profession, his patients, and his country or state. My own experience and a careful study of the conditions for the past two decades convince me that many blunders

and not a few heartches would be prevented if every student were well taught in the ethics of the profession.

When the principles of medical ethics are carefully observed in our everyday walk, the public at large will no longer look upon ethics as an intricate puzzle, but will realize that it is but a practice of the marvelous teachings of the great altruist and will revere the profession as never before. Because, at the present, though the twentieth century is just resplendent in all of its glory and beauty, commercialism is almost in control of every vocation and profession, and there is more urgent need for frequent and careful study of our rule of conduct than ever before.

The practice of medicine is not a vocation for the egoist but for the altruist, and the more completely the ego is eliminated from the medical man, the more nearly does he approach the sphere of the ideal physician. The glitter of gold and the jingle of the "almighty dollar" may be very fascinating to the two most important of the five senses, but as long as they continue to be the chief attraction, scientific medicine cannot be practiced to its full extent.

It is hardly necessary to attempt to trace the source of medical ethics. When we remember that Hippocrates in his oath says, "With purity and with holiness, I will pass my life and practice my art," and in his aphorisms: "The physician must not only be prepared to do what is right himself, but also to make the patient, the attendants, and externals co-operate," we are convinced that ethics is as old as medicine itself.

If we would build securely and permanently we must have an everlasting foundation. The principles of ethics may be safely anchored upon three cornerstones, each supporting a most essential portion of the beautiful structure so necessary to our temple of fame.

The first cornerstone is the foundation of the physician's duty to his patients and may be tersely expressed in that saying of the Latins, "the safety of the sick is the supreme law."

The second cornerstone supports our relation to the state and its citizenship, and is well expressed by the reply of the Great Physician to the wily scribes: "Render therefore unto Caesar the things that be Caesar's." In our language of today, be

*Read at meeting of Medical Association of Georgia, Atlanta, Ga., 1914.

ready at all times to observe and support the law.

The third cornerstone of this temple of ethics teaches the relation of physicians to each other and makes more beautiful their conduct toward their fellowmen.

It cannot be better expressed than in the words of the Golden Rule, "Whatsoever ye would that men do unto you, do ye even so unto them."

When a young man receives the degree of M. D., he is very proud of it and deservedly so. To see Dr. written before his name or M. D. inscribed after it gives a delightful feeling of self importance. It may be all right to indulge in such evidence of the "exaggerated ego" for a few moments in the privacy of one's room, but let him be careful not to flout it before a critical public, on the hotel register, or other public places. Your title is too sacred to be used except in its official capacity.

Having selected the place where he wishes to live, the physician may announce his office and office hours in the local newspapers and may have his name with his office hours on his door. If a specialist, devoting his whole time to some special branch of medicine, he is allowed to so announce. Dr. Saundby says: "In Great Britain the only advertisement to the public now permissible is the door plate, which should be modest size and should contain nothing but the practitioner's name." In America the card announcing the name, with office and hours, is allowed, but nothing is said as to the length of time such a card may be published. It is the opinion of the writer that after the publication of the card three or four months, thereby affording ample opportunity for the public to learn where the practitioner is located, its continued publication is unwise and unethical. It certainly does not add to the dignity of the profession to have the names of reputable physicians sandwiched between the cards of those "permanently located" and other quacks. It is a violation of ethics to have your card appear a second time in the same paper or on a public program, or baseball schedule, and it does not increase respect for your skill or standing to see your name in pretty letters in the hotel lobby or elevator.

Discussing the management of critical illness, describing intricate surgical operations, in the presence of the laity or in public places, and inviting laymen to be present at

some surgical operation, are methods of advertising resorted to by some of our profession and are violations of the principles of ethics. Allowing newspaper reporters to publish interviews with you on medical or scientific topics and to furnish signed reports of the condition of patients, however prominent, except the President of the United States, are to be avoided as unethical.

Long or short biographical sketches with photographs of the physicians, except in medical publications, are violations of ethics and tend to discredit our noble profession. Some good men have printed on their letter heads positions of prominence, as surgeon to railroads, member of board of medical examiners, or board of health. Only one construction can be placed upon such letterheads, and that is, to impress the public with the importance of him whose name appears on the letter. It is a form of advertising to be avoided. The stationery to be used for writing to the laity should have only the name of the physician, together with his address and office hours, and telephone numbers if he desires. It was said of Dr. Radcliffe in the eighteenth century that "on his first arrival he had half of the porters in town call for him at all the coffee houses and public places so that his name might be known." Such deportment savors as much of quackery today as in that century.

The day will never come when the true, scientific physician will wish to advertise, nor will a thinking people expect or tolerate it. The more promptly the public learns that it is the designing, money loving mountebank who resorts to and depends upon the free use of printer's ink to dupe a suffering and heedless people, the more quickly will pass the day of the quack.

Having accepted the care of the sick, their welfare should be our chief concern. We should visit them as often as is necessary to watch the various symptoms and to direct the proper treatment, but should be very careful to make no unnecessary visits. A patient, having been committed to our care, should receive our constant attention until the disease ends, and should something occur to prevent our giving the needed attention, we should see that some reputable colleague takes charge of the case until we are free to resume the treatment.

In difficult and tedious cases it is often wise to have a consultant, and we should show a willingness and readiness to have a

colleague to see the case with us. We should ever remember that the consultation is for the benefit of the patient and the comfort of the family, and not an opportunity for the consultant to impress the family how learned and skillful he may be, nor to lessen their confidence in their family physician.

The consultant should first hear the history of the case from the attending physician before seeing the patient, and, after a most thorough examination of the case, should retire to a private place with the attendant to discuss the management of the disease. After an agreement as to the care of the patient it is wise to give the opinion in writing and signed by both physicians to the head of the family or the one nearest kin.

The consultant may give an opinion of the case to the family only in the presence of, or with the consent of the family physician, and should studiously avoid by word or deed anything that will weaken the influence of him who is in charge of the patient. If it is impossible to agree, the family should be advised and a third physician called, or the consultant retire, leaving the attendant in full charge of the case. Having seen a patient in consultation, the consultant should never take charge of the case except by request or consent of the attendant, and then only under very unusual circumstances.

If a change in treatment is indicated, unless there is some imminent necessity, such change should not be made until the visit of the attending physician on the following day.

When called to see the patient of another physician in emergency or during his unavoidable absence, only the immediate necessities of the case should be looked after, and the regular attendant should be advised by sealed note or by telephone of what has been done. Unnecessary examinations or remarks tending to reflect upon the skill or integrity of the family physician are reprehensible.

The right of the patient or family to change physicians should be recognized at all times, but such a change must be made in an ethical way. No physician is at liberty to take charge of the patient of another until the attending physician has been duly notified by the family that his services are no longer desired. It would add no little to the professional income and magnify the respect of the public for the profession if such notice were required to be accompanied by full payment of all indebtedness.

It will frequently be best for the welfare of the patient to refer him to some one who, by reason of special fitness, experience and study, is more capable of caring for the patient. The practitioner is entitled to a fee for any services rendered such patient, but under no circumstances should he expect or receive a division of the fee of the specialist. The rules which govern the regular physician with reference to another's patient apply with equal force to him who may specialize.

We should be always ready and willing to respond to the call of a colleague in case of sickness of himself or any member of his family, and he should be equally as ready to commit the case entirely to your care. Physicians and their families have often suffered because they felt a delicacy in refusing the suggestions of the colleagues who so kindly call. Patients in physicians' families should be governed by the same rules, which apply to other cases.

In the life of every physician there will be frequent demands for services to those who are really worthy of charity and he will gladly respond. This big-heartedness will often be imposed upon and the profession should make a united effort to prevent such imposition upon their time and skill.

"The clergy have no right to expect gratis treatment, nor should they be accorded it," says Dr. Saundby, England's authority on ethics. A former partner of the writer was wont to remark that he always practiced for the preachers for nothing, "for they talk for you." Such is another instance where talk fails to be cheap.

The trained nurse should pay for all medical services, as she earns more than many of our clients and requires no less care and attention. It is equally as imperative that the profession refuse free services from the nurse.

The profession of dentistry should co-operate with our profession in making the two professions most worthy and useful. Free services should not be allowed either profession.

The pharmacist should neither expect nor receive free medical attention for their families or themselves, nor should the physician accept free office rent, soda water or family medicine from the druggist.

The essayist advises that every physician refuse to use the prescription blanks furnished by the drug stores and use his own

blanks free from the name of any druggist. By thus acting he will increase the respect of the druggist as well as the laity for him and will magnify his calling.

The two professions should always work together for the upbuilding and increased usefulness of their vocations and should never allow the commercial side to weaken their respect and influence.

The state and municipality are entitled to the advice and support of the medical profession in their efforts to protect the public from infectious and contagious diseases. Such diseases should be reported to the proper authorities as soon as a diagnosis is made. The health officers should receive our fullest co-operation in their efforts to prevent diseases, for in so doing we tend to fulfill our greatest mission, to prevent disease, and more nearly approach the likeness of the Great Physician.

In closing let me commend to your most profound consideration the words of Bishop of Carlisle: "Keep no companionship, join no associations, nurse no thoughts, read no journals or books, which tend to set men against one another instead of with one another."

DISCUSSION ON DR. CLARK'S PAPER.

Dr. J. G. Dean, Dawson: There are many of us who forget ourselves sometimes when it comes to the matter of ethics. If we would have more regard for each other and more regard for the ethics of the profession, in other words—for the Golden Rule—there would be a much more kindly feeling among ourselves in our respective localities, and I am certainly glad Dr. Clark read that paper. There is so much in it that is food for thought. If we would observe in our relations with each other at all times the Golden Rule, which means medical ethics, not only would the public think more of us, but our bank account would be better.

Dr. Henry R. Slack, Lagrange: I have enjoyed Dr. Clark's paper very much indeed, but there is one portion I may not have heard exactly right with which I take issue with him, and that is the duty of the consultant. When you are called to see a patient, what is your duty? He said that we should not make any extra or unnecessary examinations. Let us see what unnecessary examinations are. Frequently you are called to see a pa-

tient in the country or in town and ask for the history. The history which the family physician gives you is very indefinite. No blood pressure has been taken, no blood count made, no urinalysis made, and no examination made of the stomach contents, and I do not think you would be doing justice to the patient not to take the blood pressure or to make a thorough examination of everything. Of course, that may not be an unnecessary examination. The duty of the consultant is to the patient as well as to the physician. Of course, you should cast no reflection on the attending physician who has called you in consultation, but do not neglect a critical or careful examination, and then consult with the physician in charge and let him make a report; but those kind of examinations frequently cause remarks from the family, and I think with no reflection upon the physician making it. I do not think the consultant is doing his duty to the family or to the patient or physician either who simply agrees with everything that has been done for the patient, and that everything has been done that can be done, that the diagnosis is all right, when you know in your heart you have not told the truth exactly. You do it simply to shield the doctor who calls you in consultation. The thing to do is to offer suggestions, and the physician will appreciate them if you will allow him to carry them out, and the duty of the consultant is not to say that everything has been done, but that something can be done in all probability further. Two heads are better than one, and if it were not so, what is the use of having them?

Dr. T. J. Charlton, Savannah: The time has come when we should frankly recognize that all the trouble is not with our ignorance of ethics, but rather with our neglect of ethics. Ethics means nothing more than right action, and the man who is properly trained in medicine should know and must know what right action means. My experience with ethics has been that not once in ten times can it be attributed to ignorance. Our best hope on the subject of ethics is higher education, with a longer requirement and greater requirement for entrance to medicine, and then we will have men who are educated to right action. There are a number of men who naturally have that feeling, although they know what is right. You give a man a long period of preliminary edu-

education, if he has not got it, you qualify him for it, and the trouble is decided intent. Look at the medical journals today. You read articles by men who are strictly advertising. The little man must not keep his card in a paper or journal, and yet some of our big men are doing it all the time, and doing it intentionally.

On one occasion not long ago a man fell and suffered neuralgia in his great toe. He was going off for the summer, and he had this and that diagnosis. I told him his health was bad, that he should go off in the mountains, and that when he came back in the fall he would be able to get around all right. He went to one of our largest cities and was treated. His great toe was ripped open from one end to the other, and he came back no better. He said to me, "Do you know Professor So-and-So?" I replied, "I never heard of him." "Well," he said, "he has written a big book; he has it on his table; I read it every day. Another thing, he said that my case was so extremely unusual that he would like to have the privilege of taking me before his clinic. I went and in the presence of 500 or 600 men I showed my foot." That was not ignorance; that was intent, and most of the violations we have of ethics are intent, and the way we are going to get around it is to educate our men to do what is right. The code of ethics is simply a code of a gentleman. Our men do not need to be drilled in that if they have the right principles in them. (Applause.) As I view this question, to me the only hope is in a longer education and stricter requirements on the part of the men who enter our profession to keep the tone up.

Dr. E. C. Davis, Atlanta: The doctor who took issue with Dr. Clark (Dr. Slack) in regard to making unnecessary examinations misunderstood Dr. Clark. I think Dr. Clark had reference to unnecessary examinations in the absence of the attendant. It goes without saying that the conscientious consultant must of necessity verify every finding of the attending physician.

Dr. Clark, in Closing: I am sorry Dr. Slack misunderstood me. I hope the audience did not. We must be true to ourselves, and if we are true to ourselves we will be better to our patients at one time and all the time and under all circumstances. I meant to say that in the emergency class unnecessary examinations should not be made. It must

rather frequently occur that a physician being called in an emergency has made some examination and has said to the patient and to the family that so-and-so existed and this tends to cast a reflection upon the attending physician. The consultant should go thoroughly into the case and be able to give his best to the patient. The patient's welfare should come above all things. If necessary to sacrifice the attending physician and the consultant, to take care of the patient, let them be sacrificed, but that is not necessary. That is where Dr. Slack misunderstood me. In emergencies let us attend to the emergency only; notify the attending physician and let him take care of the case. If in that emergency we find something he may have overlooked, call his attention to it and not the patient. Let us protect and honor each other and strengthen our standing with the laity.

I wish to thank Dr. Charlton for his discussion, and I do not quite agree with him that it is not always due to ignorance. Some of us are learned in other things, but not in ethics, and sometimes, as he has suggested, it is no doubt carelessness of ethics. He suggested higher education, a good suggestion. Higher education means leading out for oneself, and the more completely we forget self and the more completely we concentrate our thoughts and minds and efforts upon the welfare of the patient, the more fully do we serve the patient, and the more nearly attain to the ideal physician and thereby reflect credit upon our profession and prove to be useful citizens in this life. (Applause.)

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Journal Medical Association of Georgia.

THE USE OF PROTEIN MILK IN DIARRHOEAL DISORDERS OF INFANCY.

W. A. Mulherin, M.D., Augusta, Ga.

The use of protein milk and the uniformly good results obtained in diarrhoeal diseases of infancy is well known to all pediatricians.

My object in calling attention of the Medical Association of Georgia to it is prompted by two reasons.

First. To encourage, and in fact to ask, the general practitioner to try this most valuable life saving means in the treatment of intestinal diseases of infancy. In my consultation work in Georgia and South Carolina I have on many occasions been impressed with the fact how few physicians in general work are making use of it.

Second. For the purpose of endeavoring to lower our infant mortality, which is today something appalling. When we recall that approximately one-fourth to one-fifth of all deaths, at all ages, and from all diseases, occur in the first year of life; and when we, furthermore, remember that 60 per cent of this one-fourth to one-fifth are due to gastrointestinal disorders, we begin to realize and appreciate the importance of any valuable help along this line.

What Is Protein Milk, Its Origin, Theory and Uses.

Protein Milk is a cow milk modification, called by many names, such as protein milk, Finkelstein milk, cured milk, casein milk, Eiweissmilch.

Origin and Theory. Finkelstein and Meyer, the two eminent German scientists, after careful study, scientific work and clinical experimentation, advanced the idea that diarrhoeal diseases of infancy originated in a functional weakness of the intestines, and that this functional weakness was kept up and increased by fermentation. They, therefore, advised as the first step in treatment of diarrhoea to stop the fermentation.

Czerny and others have attributed the chief role in fermentation to fat, but Finkelstein and Meyer conclude from their experiments, in which they obtained the same results in these cases with diluted whole milk as they did with diluted skimmed milk and buttermilk, that the fermentation is not due

to fat. They also found that the addition of a freshly prepared casein (curds) to skimmed milk and to dilutions of whole milk, which babies with indigestion were taking, not only did not make babies worse, but apparently improved them. The thin acid green stools changed in a few days to typical light colored and dry soap stools. They concluded, therefore, that casein had an anti-fermentative action and was harmless. Milk sugar must, therefore, by exclusion be the cause of the fermentation.

They found that the addition of milk sugar to the food of babies whose diarrhoea was controlled by the addition of casein, resulted in the recurrence of the abnormal stools. The long continued diminution of the carbohydrates in the food also relieved the symptoms, even if the casein was not increased. They adduce as further evidence that the primary cause of fermentation lies in the sugars and not in the fats, the fact that when babies having fatty diarrhoea were given the same amounts of casein and fat in various saline, sugar-free solutions, instead of in the sugar holding whey, the fatty diarrhoea ceased. Milk diluted with water was, moreover, better borne than milk diluted with whey.

They concluded, therefore, that the principles on which the preparation of a food to combat intestinal fermentation depended were: A diminution in the quantity of milk sugar, a diminution of the salts through dilution of the whey, and an increase in the casein (curds), with varying and, under certain circumstances, not inconsiderable amounts of fats. They consequently developed a food to meet these indications. This food is prepared as follows:

Original Protein, Finkelstein or Eiweissmilch.

Heat one quart of whole milk to 100 F. Add four teaspoonfuls of essence of pepsin and stir. Let the mixture stand at 100 F. until the curd has formed. Put the mass in a linen cloth and strain off the whey from the curd. Remove the curd from the linen cloth and press it through a rather fine sieve several times by means of a wooden mallet or spoon. Add one pint of water to the curd during this process. The mixture should now look like milk and the precipitate must be very finely divided. Add one pint of buttermilk to this mixture.

Finkelstein and Meyer used buttermilk in

*Read at meeting of Medical Association of Georgia, Atlanta, Ga., 1914.

the preparation of this food for the following reasons: First, because of the small amount of milk sugar it contains; second, to obtain the good effects of the lactic acid, and third, because buttermilk can be kept for a long time. The composition of this food is:

Fats	2.5 per cent.
Sugar	1.5 per cent.
Proteids	3.0 per cent.
Salts	0.5 per cent.

One quart of this milk contains about three hundred and seventy calories.

Uses. They used this food in a great variety of conditions accompanied by diarrhoea, such as dyspepsia, decomposition, intoxication and parenteral infections, and in their original paper claimed good results in all, but not in the new born.

The general principles laid down by them for the use of this food in these conditions were as follows: A preliminary catharsis, if necessary, followed or not by an initial period of starvation and tea diet, as the case may be; small amounts of casein milk; larger amounts of casein milk, the addition of some carbohydrate, other than milk sugar, or can sugar, preferably some dextrinized preparation of malt sugar, such as dextrimaltose. They claimed that the loose green stools were quickly replaced by typical soap stools and that the addition of malt sugar did not cause a recurrence of the symptoms of fermentation. They called attention to the fact that on account of the low nutritive value of the food there was certain to be a loss of weight in the beginning of the treatment. This was followed by a stationary period, then, when the amount of food was increased and carbohydrates added, by an increase in weight. They found that babies could be kept on this food for months, and continue to thrive.

The good results claimed by Finkelstein and Meyer in Germany were not exactly obtained in America by the use of their original protein milk. Then it was that Czerny's contention that fats played an important role in fermentation was considered and resulted in the use of fat free protein milk.

Fat Free Protein Milk.

Made in identically the same way as Finkelstein and Meyer's original formula prescribed, except skimmed milk is used in place of whole milk, also care being taken that no butter is left in the buttermilk that is added, having it as fat free as possible.

Immediately under the use of fat free protein milk, instead of protein milk made from original formula, results changed from fairly good and inconstant to constant and truly brilliant ones. So uniform and excellent has been my personal experience, as regards the corrective and curative properties of fat free protein milk, that I would dislike very much to undertake the treatment of any serious bowel trouble in an infant today without having recourse to it. I would truly feel culpable if I did not give the patient the benefit of its many advantages.

I would suggest, however, in using it, that you do not leave optional the intestinal irrigation, the initial purge and the first twenty-four hours' diet of tea or barley water, as stated by Finkelstein and Meyer. It appears both sensible and logical that the removal of the products or by-products of fermentation from the bowels can result in nothing but good to the patient. Again, starvation diet of barley water for the first twenty-four hours can do nothing more than raise the digestive tolerance of the infant for food and thereby help and hasten the curative effect of the fat free protein milk.

One or two other points occur to me that may prove of value. The use of buttermilk after the fat protein milk has corrected the bowel trouble and returned the temperature to normal appears to work very happily. Usually it takes from three to five days, as in cases of acute ileo-colitis, to have the stools show normally in color and character. After they have been normal for two or three days, buttermilk, which is more nutritious than fat-free protein milk, can be advantageously substituted in the majority of cases. It makes a good substitute for the reason that its composition conforms in a certain measure to Finkelstein's and Czerny's ideas of low fat, low sugar, high proteids and low salts. Of course, in babies one year of age or older after reaching the buttermilk diet, food is added as the patient's condition warrants.

In cases of very young infants it is wise oftentimes to dilute the fat-free protein milk with barley water—about one-half or one-third, according to age. The same applies to the latter substitution of buttermilk in those cases, it is well to dilute the buttermilk with barley water in the same way. Then after buttermilk and barley water diet, lead back to original milk modification, having due respect for the fats in the food in doing so.

In some cases it is difficult to get our little patients to take enough fat-free protein milk to do them any good. In such instances it will be found to be due to one of two causes; either the infant is too ill to take nourishment, or it has a dislike for the buttermilk taste of the protein milk. In the former, gavage must be practiced or we will lose our patient. In the latter, saccharin grains one to the quart, or one-quarter to the half pint, may be added with excellent results. It sweetens, as you well know, and makes the protein milk more palatable. This same little trick can be practiced in making babies take barley water when they dislike it.

Now as regards results obtained with the use of fat-free protein milk, I have been unable to gather any valuable statistics. I can state, however, that the mortality at our Children's Hospital in Augusta, the Wilhenford, during the last year, has been lowered fully 40 to 50 per cent in cases of acute ileo-colitis, acute intestinal indigestion, and acute intestinal intoxication, under its routine use. It is well to remember that these cases come to us late and are not ideal cases to treat successfully. In private practice, where cases are seen early, results have been even more gratifying.

DISCUSSION ON DR. MULHERIN'S PAPER.

Dr. M. A. Clark, Macon: Dr. Mulherin's paper is so complete and practical that there is very little I can add. I want to emphasize the point he has really made, the importance of starvation for the first twenty-four hours. He has already told you that if you do not starve these little patients and get rid of the by-products of fermentation, you will not get results, no matter what form of diet you use in these cases. You should resort to the initial purge and starvation practically, with rice water or barley water, and then begin with the milk.

Personally, I have not had experience with the protein milk that he has, it being rather difficult in the average home to get it properly prepared, so I have been in the habit of using the whey of the barley water and adding buttermilk, and gradually getting back to some fat, but he has suggested the initial purge, the twenty-four or thirty-six hours starvation, and then milk with decidedly less sugar and practically free from

fat, and getting back to the proper diet and not giving medicine. Probably the most important point of all is the diet and not medication.

Dr. Mulherin, in Closing: I wish to thank Dr. Clark for laying stress upon the initial purge and starvation for the first twenty-four hours. It is very important.

I do not like to take issue with him about it being hard to prepare protein milk. It is hard to prepare at first, if you do not understand what you are trying to get, but in a private home you can get it easily. Any mother with a fair amount of intelligence can prepare it for you. We have places down our way where it can be prepared; in fact, we have it prepared in the children's hospital. We telephone for a quart of protein milk for Mrs. So-and-so, and it is ready. We used to have mothers make it at home, and if you get the idea it is simple. Just get the amount of curds of a quart of milk, and if they are not digested by pressing them through a fine sieve several times, add enough water to make one pint with the curds, and you have obtained a quart of milk and add an equal quantity of water to the milk. It is simple. That is the original formula. Take my advice and leave fats out. Try fat-free protein milk and your results will be really brilliant, and my object in calling attention to it is that we are not taking this valuable means of saving the patients' lives. If you will use a fat-free protein milk with babies who have diarrhoea or intestinal troubles, you will be astonished at what you can accomplish with it.

OBITUARY.

Dr. Ezra New, Dublin, Ga., a graduate of the University of Georgia, Medical Department, class of 1887.

Dr. D. E. McEachern, Statesboro, Ga., a graduate of the South Carolina Medical College, class of 1894.

An advertisement in The Journal of the Medical Association of Georgia will bring results. Rates sent on request.

NEWS NOTES.

The Chattahoochee Valley Medical Association will hold its annual convention in West Point, July 14 and 15.

From the programs just announced for the West Point gathering the annual meeting this year will be unusually interesting. Some twenty-eight different subjects are announced for papers and discussions, and some of the most renowned men of the profession in the South are listed on the two days' program.

The officers this year are:

President—Dr. J. M. Poer, West Point, Ga.

Vice President—Dr. Montague L. Boyd, Atlanta, Ga.

Secretary-Treasurer—Dr. W. J. Love, Opelika, Ala.

The Board of Council consists of:

President—Dr. J. H. McDuffie, Columbus, Ga.; Dr. A. L. Harlan, Alexander City, Ala.; Dr. H. B. Disharoon, Roanoke, Ala.; Dr. Geo. H. Cooper, Opelika, Ala.; Dr. Hugh McCulloh, West Point, Ga.

The Program Committee for this meeting consists of: Dr. Hansell Crenshaw, chairman, Atlanta, Ga.; Dr. H. Stokes Munroe, Columbus, Ga.; Dr. J. N. Baker, Montgomery, Ala.

The Fulton County Medical Society has passed these resolutions:

"Whereas it has been brought to the attention of the Fulton County Medical Society that one of our members, Dr. L. C. Roughlin, has been indicted by the grand jury of this county on a charge growing out of an unfortunate accident which occurred in his office on April 20, resulting in the death of one of his patients; therefore be it

"Resolved, That the earnest sympathy of this society be extended to Dr. Roughlin, and that we express to him our sincere confidence in his integrity as a physician, and earnestly request the public to withhold judgment until all of the facts are made known. Be it

"Resolved further, That a copy of these resolutions be sent to Dr. Roughlin and a copy spread upon the minutes of this society."

ELEVENTH DISTRICT MEDICAL SOCIETY.

The Eleventh District Medical Association met in semi-annual session at the new Hotel St. Simon, with quite a number of physicians from various sections of the district being present.

The morning session was called to order in the pavilion of the hotel by Dr. C. W. Roberts, of Douglas, president, which was followed by an invocation by Rev. C. A. Jackson. In the absence of Mayor Hopkins, Dr. J. F. Abercrombie delivered a few words of welcome, which were eloquently responded to by Dr. Roberts.

The following papers were read and discussed:

"The Negro and His Relation to Public Health," Dr. T. F. Abercrombie, Brunswick.

The discussion was ably led by Dr. J. W. Simmons, of this city.

"First Aid to the Injured Eye," Dr. A. B. Mason, Waycross.

"Hyperension," Dr. J. W. Dantel, Savannah.

"Acute Adenitis and Erysipelas Following Tonsil and Adenoid Operation," Dr. B. H. Minchew, Waycross.

The afternoon session was devoted to clinical reports in informal discussions and to the transaction of business.

A committee was appointed to draft resolutions on the death of Dr. M. M. Johnson, of Waycross, who was a member of the association.

Another committee was appointed to arrange for another meeting place for the mid-summer session, there being manifested very little interest by the local physicians and others in co-operating with the officers of the society in making arrangements necessary to the success of the meetings.

Douglas was selected as the place for the fall meeting of the society, which will be held on the third Tuesday in July.

A resolution was adopted requesting the Georgia legislature to appropriate funds necessary for placing the statutes of Dr. Crawford W. Long, the discoverer of sulphuric-ether anesthesia, and Alex. W. Stephens in the Hall of Fame in Washington, both of Georgia's niches being still vacant.

Another resolution looking to the establishment of a school for deaf mutes in South Georgia was recommended to the legislative committee of the Medical Association of Georgia for their action.

The physicians, after spending a pleasant day, returned to the city last night, some of them departing for their homes, while others will leave today. Dr. J. W. Simmons and Dr. J. F. Abercrombie were present during the entire day and did everything possible to make the meeting the success that it was.

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REMARKS ON VITAL STATISTICS BILL, HEALTH BILL, MEDICAL PRACTICE BILL, ETC.

The President: It gives me great pleasure to use the recess time for the consideration of topics which I regard as of great interest to this association, and I am going to call on a few of our men and enthusiastic workers to talk about the Vital Statistics Bill, the Medical Health Bill, and anything else that may be of vital importance to the association.

I will now ask Dr. Roberts to say a few words.

Dr. Stewart R. Roberts, Atlanta: In an

address Dr. William Osler before the Society of Medicine on the third day of January of this year opened his remarks with this almost inspiring sentence: Unrest and change are the order of the day." and unrest and change towards progress are the order of the day in our Medical Association of Georgia. We have come to a time when each one of us recognizes and each one of us is going to impress upon the state that the body of a man is as valuable as the body of a horse. We must get hold of the idea that the doctor is a most valuable citizen to any state. We must get hold of the idea that we have influence and associate ourselves together to exert that influence for the benefit of the state. We have passed under the administration of our retiring President the Medical Practice Bill. It means more to the state, it seems to me, than any of us are yet able to realize. We have before us at the coming session of the legislature bills that go hand in hand. The right hand bill, it seems to me is the Vital Statistics Bill; the left hand bill is the Health Bill. I might reverse them, they are so important. I do not believe we can differentiate between them. We have in Georgia three diseases that have been characteristic of our state. When a patient comes, it seems to me, we ought to realize that we have three Georgia diseases—hookworm, malaria and pellagra. They are like the poor, they are always with us in Georgia. We do not know how many we have or how much. We have in Georgia thousands of school children. This Medical Practice Bill of our friend, Mr. Ellis, will give medical inspection to every public school child in the state of Georgia. If that were the only virtue, it would be worth while, but the bill has a thousand other virtues. It puts a health officer in every sanitary district and gives them equal rank with the Georgia sheriff. We have had sheriffs in every county since we took the state from the Cherokee Indians, but we have had no real health officer yet. This bill puts an officer in each sanitary district in Georgia. He attends to the inspection of the school children and will know the state of health in every sanitary district. Each county will form a sanitary district.

I simply mention these two bills, and if we get together it will be easier to pass them at the next session of the legislature than it was to pass the Medical Practice Bill at the last session.

Dr. W. W. Pilcher, Warrenton: You all know I have been enthusiastic about the Medical Practice Bill for two years and the benefits to be derived from it. One point I want to stress in connection with the Medical Practice Bill is that it behooves every doctor in every county and every congressional district and other districts, particularly senatorial districts, to come to the rescue of the State Board of Medical Examiners for the proper enforcement of the law. I want to say here and now publicly, and I know I am voicing the sentiments of the Medical Association of Georgia, when I say I am proud of the fact that has been demonstrated here, we have got men enough with backbone to handle the situation that has recently come to our notice in the city of Atlanta and in other parts of the state. The co-operation on the part of the medical profession of Georgia will bring out and make possible the successful carrying out of the Medical Practice Bill. This bill is the most important phase of legislation that has been given to the medical profession in all these years. There is nothing comparable to it, and carried out to the letter it means that suffering humanity will get the benefit of it.

All the medical colleges in our state have already A and A-plus rating, and let us hope that the day is not far distant when the other colleges will raise their standard accordingly or else get out of business.

As to Mr. Ellis' bill, I favor it, and also the Vital Statistics Bill, and I hope both of these bills will pass.

I want to congratulate the association on the organization we have. I have been engaged in this work for two years, first as president and then as chairman of the Committee on Public Policy and Legislation. I went to Atlanta twelve times during the session of the legislature in two years on this bill. The doctors went to the legislature and to the senate, and stood like a brick wall. So much for organization. Having accomplished what we have, let us elevate the standard of the medical profession of Georgia to such an extent that other states will not be ashamed to establish reciprocity with the entire State of Georgia.

Dr. T. J. Charlton, Savannah: You have just heard from our eloquent President and enthusiastic Pilcher. He is always on the job. Yesterday I heard him praise Georgia as the empire state of the South because

she has gotten the Medical Practice Bill. He was right. But now comes the Vital Statistics Bill. Gentlemen of the temple which we are building, of which we, the Medical Association of Georgia, are the workmen, the foundation of that temple is vital statistics. It is also the chart. It is also the primary ground from which we take all our bearings, and without that we cannot make good our claims or refute the charges of our enemy. Why Georgia has not had it I fail to understand, but the time has come when now, having a medical practice act, we, the workmen of the temple, should be able without any trouble, with the hearty co-operation of the organization, to impress upon the legislature of Georgia the need of so fundamental and so absolutely essential a law as that of Vital Statistics. It makes no hardship upon anyone; it makes no change in our county officers. It is something that can be carried out and it should be carried out. Now, gentlemen, fresh with the victory of the Medical Practice Act, we should concentrate upon this law of Vital Statistics. It is a shame that Georgia has not had it long ago, and Georgia in her laws of this character ranks as forty-fourth among the states of the Union. We do pride ourselves upon being the Empire State, but we must rise to this point because it is really the foundation stone of our temple, that temple of which the members of this association are the master builders.

Dr. F. W. McRae, Atlanta: It is a very great pleasure for me to say just a word on this subject. There is not any member of this association who loves the association more than I do, nor is there any member of the association who loves his fellow members more than I do. I have a way sometimes of saying things that may seem harsh and irritating like a currycomb that I do not mean, but I know I hurt people's feelings when I have the kindest sentiment towards them. Others do the same thing. My feelings are easily hurt; but I take it, on the Medical Practice Act and the Vital Statistics Bill we are a unit. We must remember when we get together on these things we think our personality in the common good. Let us get together. Let us be ready to work and put forth a strong effort for Vital Statistics, for the Health Bill, and for the good of humanity.

Dr. L. C. Allen, Hoschton: I have al-

ready spoken on this question several times and I do not know that I have anything else to say. The question of Vital Statistics is a large one, and we can present many arguments in favor of it. I want to say this, that the medical profession is not fully aware of the power it possesses. I mean political power and the power to secure legislation. You have the power, but it has not been in the past exercised. It has been largely latent. We want to convert it into activity for the purpose of accomplishing things.

It is not argument altogether that counts when you go to the Georgia legislature. Arguments are valuable, facts are valuable, but it is the influence that counts, and the legislature last summer would not have passed the Medical Practice Bill from the arguments that were presented to it, if the members had not known there were back home those who would try and defeat them at the next election if they did not vote for it. When you want anything done you have got to touch a man where he is interested. It is influence as well as fact and argument that turns the trick in these legislative matters.

Somebody has asked where they can get a copy of it. I had three hundred copies of the Vital Statistics Bill printed; the state printed them. They are in the custody of the clerk of the House of Representatives. I suppose you can get a copy of the Vital Statistics Bill by writing to the Director of the Census, Washington, D. C. The bill that was introduced in the Georgia legislature is almost a verbatim copy of that model bill. It is the policy of the Census Department to secure uniform legislation in all states upon the subject of vital statistics. At the present time the model bill has been passed by eleven or twelve states. Most all states have a Vital Statistics law, but they vary in their provisions. This model bill will be one of the best in the Union.

Dr. J. D. Chason, Bainbridge: The benefits to be derived from a Vital Statistics Bill go without saying, and every physician here is fully aware of that one fact. We have no basis upon which to prove our claims that we make in this great Empire State of the South without Vital Statistics. We cannot show to the public our progress. We cannot show the rate of births nor the deaths we are having in Georgia without Vital Statistics. We could not prove our claims in court

and many other things without Vital Statistics. In other words, I do not consider that our sanitary laws would be worth very much in making our claims to the public without a Vital Statistics Bill. I believe the Vital Statistics Bill can be passed without opposition at the next session of the legislature, if the physicians of each and every one of the various cities of Georgia will exert the proper influence with representatives and will do all they can for its passage. Every representative should be fixed before he goes to the legislative halls. If that phase of the matter is attended to, then the work will be easy sailing.

As to the bill that has been suggested and so ably outlined by Colonel Ellis, a sanitary law placing a sanitary district in each county, or where a county is so small putting together two or more counties, it is of vital importance to every one, and I hope every one will read that bill, and as the next legislature occurs before the primary, you will put yourselves in action and have a concerted action along that line. If this is done, you will have no trouble in getting that bill through. But if you wait until after the next legislature you may have trouble because it carries with it a very small tax upon each county to maintain it, and I am afraid there will be such a great cry about the expense that there will be some opposition to its passage. Our state, as many of you doubtless know, has a floating debt of \$1,500,000 practically and the tax rate is getting rather heavier, and it would be a good idea to get busy with the legislators at home and get them right before they go to the legislature. The people themselves do not realize the importance of this bill. The physicians should educate the people up to the importance of these laws that we are now advocating. We need to put these laws upon the statute books of Georgia, but this cannot be done unless we stand behind them. It is up to us to see that they are enforced; it is not up to the men that do not belong to the association. It is a menace to have a law and not enforce it, and if each one of us will get busy we will have no trouble in passing the Vital Statistics Bill and the Sanitary Law at the next session of the legislature.

Dr. Charles H. Richardson, Montezuma: There are few members of the Georgia legislature who come from the active branch of the profession; the majority of them have

retired from active practice. Of the majority who enter the Georgia legislature that belong to the medical profession, few of them are in active practice, and therefore few feel the needs of the profession right at heart.

When I left for the Georgia senate I put my car in the garage and saddle bags in my office, and took the train, having been in the active practice of my profession up to the last moment, and when the Georgia senate adjourned I went back home, took my car out of the garage and saddle bags out of the office, and went into active practice again. I knew Georgia needed members of the profession in the senate and in the house who are interested in elevating the medical profession and in putting laws on the statute books of the state which were needed by the profession. For that reason I have taken an active interest in this Medical Practice Bill.

In the senate there was only one amendment made by Senator McNeal which was accepted by the senate, and that was allowing those addicted to morphine and alcoholic habits to appeal to the jury of the superior court in which they lived before taking away their license and debarring them from the practice of the profession. I allowed that amendment to go through.

As to the Health Bill before the Georgia legislature now, I am in favor of it and will give it my hearty support. There is one drawback, however, to the bill which will cause it to be fought in the house and in the senate, and that is the salaries that are attached for these health officers. I believe it is \$3,000 for four counties. This bill will be fought. If there is any way that can be devised to modify that in some way the bill will in all probability go through without any trouble. I think Georgia needs a Vital Statistics Bill, and it is one of the most important that will come before the legislature this next summer. People from northern Georgia and Tennessee and South Carolina are moving down into our southern counties, and they are making inquiries as to what are the prevailing diseases of our counties. They say, what is your death rate, and what is your birth rate? There is no way under God's green earth of giving that information to them. I wrote to the Secretary of the State Board of Health, Dr. H. F. Harris, and said if he would prepare a good bill on Vital Statistics, not too voluminous but which covered the ground fairly and clearly, I would introduce it and use every effort to

get it passed in the senate. He replied to me that already such a bill had been introduced by Mr. Ellis which would cover all the ground, and we did not need it. Georgia needs a Vital Statistics Bill, and I would like to see that passed at the next session of the legislature. I have never seen a copy of the bill of Colonel Ellis that Dr. Allen spoke about. If it is too voluminous it will be fought; it will not go through. Something must be done to cover as much ground as possible and in the fewest possible words.

The President: The Chair wants to say for the information of the members of this association that he has been in correspondence with Dr. Cressey L. Wilbur of the United States Bureau of Census, and he thinks the model bill is the ideal one to pass. Many of the Southern states have passed a simplified copy of this bill which is thoroughly acceptable to the Bureau of Census. That is an answer to the suggestion of Dr. Richardson about not trying to pass before the senate and the assembly a voluminous bill.

The chair would like Dr. Dean to continue this discussion.

Dr. J. D. Dean, Dawson: It would be difficult to add anything to what has been said by the preceding speakers. What they have said is in line with what ought to be said. It took several years to pass the present Medical Practice Bill, and there could have been but one reason for that situation, namely, lack of co-operation on the part of the doctors of the state. Dr. Charlton has urged co-operation. We could do a great deal if we can co-operate to the end that we want to obtain. If the doctors all over the county would constitute themselves into a committee of one, they would constitute the most influential body of men in that county. If we get together and co-operate with each other in any effort to pass this or any other bill, there will be no difficulty in getting the bills through promptly. It has been said that we cannot pass both of these bills under consideration at the next session of the legislature. Why cannot we pass them? I do not see any reason why. They are both intended for the good of the people, intended for the benefit of Georgia and every citizen of the state. They are intended, so far as doctors are concerned, in line with the Medical Practice Bill in a sense, to hurt our own business. Why then can we not by co-operation and energy, convince the people of these things,

and as some one has said, when we elect men to go to the legislature, unless they are willing to vote for good bills which mean so much for the state, we should see to it that somebody else goes to the legislature to represent us. There should be no question as to what a senator or a representative is going to do. When you touch a man's pocketbook you touch his personal interest. You touch a thing that has interested him. We can control a representative better in that way than in any other manner. In every way we can think of these measures will help the state. It is right to work for their passage. A good deal of hard work was done before we accomplished the passage of the Medical Practice Bill. Last year and the year before quite a number went before the committees of the legislature who had the Medical Practice Bill in charge. The year before we almost managed to get it through. Last year we know what we did, and perhaps there is no state in the Union that has a much better bill. Now, there are two other bills, the Vital Statistics Bill and the Health Bill, both of which are worth as much as those that have already been passed. I think it is the duty of this association to go on record in regard to these matters, and I want to say in conclusion that if we will all get together in our several counties and co-operate and bring influence to bear upon our legislators, we will have no trouble in getting these bills through the next legislature in my opinion.

The President: The entire membership of the American Bar Association totals only 5,000 members, and they asked me how it was possible that we have 1,300 members of the Medical Association of Georgia. I told them it was done and accomplished by hard work, and as Dr. Dean has just said, by thoroughly organized work. I think as a result of organization that everything is feasible, and I thoroughly commend the doctor's suggestion that we keep on building up our organization.

It gives me great pleasure to call on Dr. Clark.

Dr. M. A. Clark, Macon: There is no necessity of arguing these bills before this assembly, and it is hardly necessary, for so much has been said and well said. I would like to say, however, that I thoroughly indorse those bills, the model Vital Statistics Bill, and the Health Bill of Mr. Ellis. I do not see any reason why those bills will not pass at the

coming session of the legislature if we work for them properly. We all agree that in unity there is strength. If the members of the Medical Association of Georgia can unite in this matter, as has been suggested here, and use their influence with legislators at home, we can accomplish anything we want, and let me suggest that during the next few months you will get copies of these two bills and take a little time from the study of the constitution and by-laws and familiarize yourselves with them so that you may be able to discuss them with the legislators intelligently and show them the benefits of these bills, and make them understand the reason for advocating them and the necessity for espousing the cause in the legislature. Here is one of the greatest troubles with us; take the Medical Practice Bill Act. The first time I approached one of our representatives I did not have a thorough knowledge of the bill, and when he asked me some questions on certain points I could not answer him with intelligence. That showed the wisdom of being familiar with the different points in these bills. A thorough knowledge of them will strengthen us, and if we will exert our influence by united efforts we will pass both bills, which means so much to the state of Georgia and so much to humanity in Georgia.

Dr. Charles L. Williams, Columbus: I certainly agree with all that has been said by these gentlemen on these very important subjects. Of all the sciences, perhaps medical science has kept pace with them all. In a practice of forty-seven years I do not know that the Medical Association of Georgia has ever been in better condition than it is today, and I want to congratulate those gentlemen who have made the subject a study and have worked so hard for the passage of the Medical Practice Bill. I approve of both of these bills under consideration. I was with members of the association in Atlanta several times, and I know how hard they worked. I know that the various representatives from the counties, at least three out of four, were heartily in favor of the Medical Practice Bill, and I think there is nothing connected with the practice of medicine that is so important as to eliminate the fake business that is going on in this state even now. We ought to have some medical bill which will eliminate everything of that sort. Let me mention a recent case. A patient was brought to my county a few miles from Co-

lumbus to the city of Atlanta on account of his bad health. He was treated here by a man who is supposed to be a regularly licensed physician, and the first thing he did to this man or to his wife was to exact from her \$250. It was absolute robbery committed right here in your city. He stayed here but two weeks when he was removed to a surgical sanitarium, and his case is said to be incurable. If that man had been sent earlier his life might have been saved, but he was kept here for two weeks in a boarding house, and had exacted from him \$250. We need something behind this movement. I do not know what it is. We need some law to eliminate everything of that sort, and I would favor taking the thing by the root and tearing it up.

Dr. J. Lawton Hiers, Savannah: I for one do not think it is altogether right to call on a man without a moment's notice and expect him to make a better speech than Dr. Pilcher or Dr. Clark, and the numerous other men who have had perhaps a week or more to prepare their speeches. (Laughter.) Nevertheless, I cannot refrain from saying a few words on this occasion in commendation of all that has been said, and especially of the nable work done by the leaders in the passage of the Medical Practice Bill, which was accomplished last summer. Few of us realize what it means yet, but we have just begun, and how have we accomplished the small amount up to the present? Simply by organization. I believe that I will suggest as a slogan for this association both organization and loyalty. With these two, gentlemen, we can accomplish anything we undertake. It is unnecessary for me to say how we should accomplish this through our direct contact with our representatives because the field has already been covered. But there is no member of this association who should not be prepared to discuss organization. I have attempted to do it in my own feeble way so much that some of my friends have got to calling me "Organization Hiers," but, gentlemen, I am still at it, and I want to add "organization and loyalty."

We have since the organization of our society, and under its present regime, adopted our Medical Journal, and it is a wonderful achievement when you think about it. We have been the instruments in having passed this Medical Practice Bill, and we are going to be the instruments in the hands of the

law in the passage of these other two bills which are now up for consideration, namely, the Vital Statistics Bill and the model Health Bill. We need them, and we must have them, but to accomplish it, let us get closer together. Let us organize more thoroughly. Let us forget self, and as I referred a moment ago to organization and loyalty, let us be loyal, not only to one's self, but to our fellow practitioners. Let us be loyal to our local medical societies. Let us help out the weak brother, bring him in, show him the way he should travel, and be loyal to our state medical association and to the officers of the same. If we do this, we will not only pass the Vital Statistics Bill, or model Health Bill, but we will build for ourselves the greatest and grandest society in the universe. (Applause.)

Dr. T. J. MacArthur, Cordele: While I am in hearty accord with this movement to spend an hour in this way, I was in hopes that I would not be called on because the ground has been so fully covered. While felicitating ourselves upon the accomplishment of the recent past, I am reminded of the remark of one of our naval heroes who said, "There was glory enough for all," and in our effort to pass the two bills under consideration which are to come before the next legislature, I desire to state there will be just as much glory in bringing about their passage as in what we have already accomplished, and these bills are worthy of our best efforts. I believe that we are not justified in saying we cannot do a thing like that which is so much needed. This is so very important because it is going to cost the people of the state nothing.

I desire to speak, Mr. President, along the line of economics in relation to this bill. When we consider the cost to our state in caring for our asylums and the cost of the community in caring for preventable diseases, we are reminded that the greatest tax that our people pay is for preventable diseases, and these measures can certainly prevent this useless expenditure of money, time and suffering. When we rememehr several years ago the great West was being developed, and when Horace Greeley exclaimed, "Go west, young man; go west," the great syndicates in their effort to build up the country rail roads which they were building in that direction had copies printed that represented the Southern states and the South as being a

great marsh and unfit for habitation, we can realize something of the importance of correcting the influence and the effect of this condition, and now that the Panama Canal is being completed, I believe the South is entering upon one of the most prosperous eras of the age, and that commerce, trade, finance and immigration will turn in our direction. We have been regarded as a veritable death-hole, not only so here, but in the entire Southland and the tropics. I believe no country has ever made more rapid progress than will the tropics and the Southern states in the next generation; but why wait fifteen or twenty years for this progress when we can get it now by going after it? Let us correct the impression that has been going about regarding our country. Let us have a Vital Statistics Bill passed; let us have a Health Bill passed, and they will help to do this.

Again, I want to say I am heartily in accord with spending an hour at each annual session in this way in having a family chat.

Dr. H. H. Martin, Savannah: I did not get to hear the President's address, but I have heard from him and others who are interested in vital statistics and getting registration for the enforcement of vital statistics.

What has been said about organization and getting together is the best feature of bringing this matter before the association. I feel this way about it: We should concentrate on one thing at a time. For instance, we have the Ellis bill which is going to have a hard fight to get through, and while the Vital Statistics Bill is one of great importance, I think the Ellis bill at the present time is of more importance to us than the Vital Statistics Bill. Of course, if we can get both bills through let us do it. Let us concentrate our efforts on the one of practical importance to us at this particular time.

The question of the expense incurred to the state government in putting into operation a bill like the Ellis bill is important. It is an economic question in which we are all interested; but the objects to be obtained are so vital that we should concentrate our efforts on the Ellis Bill and the Vital Statistics Bill later.

As to vital statistics, one of the speakers, I think it was Dr. Richardson, spoke of not drafting a bill of this kind that would be too voluminous. I thoroughly approve of that. We should begin in a small way. In the first place, we should have actual regis-

tration of births and deaths, and should have more than that, accurate statements as to the birth rate. The city of Savannah is suffering today from misquotations and misstatements as to causes of death. I have forgotten what the proportion is, but every year we have certain reports of the number of deaths from malaria. I venture to say that there have not been ten deaths from malaria in ten years, yet every year there are reports of deaths from malaria. That is a detriment to our city, and any bill which will obviate these misquotations and erroneous reports will meet with my favor.

I have not given the Vital Statistics Bill any careful study, but I think all of us should give it careful study and help our President in his commendable effort to put the bill through. If we have a Vital Statistics Bill there must be some provision in it to make it absolutely compulsory and even punishable for reports to be made that are incorrect.

Dr. Edward T. Coleman, Graymont: I only want to endorse what has been so ably and beautifully said. There is one feature of all that has been said that I especially desire to commend, and that is the unanimity of opinion seemingly in the direction of endeavoring to pass both of these bills, and I would advise, and I do insist, that this association endorse both of these bills, and I earnestly hope that they may during this session.

The President: It is our privilege today to have with us Dr. Farrell, Secretary of the State Board of Health of North Carolina. This state has recently adopted a Vital Statistics Bill. Dr. Farrell is also general secretary of the Rockefeller General Commission for hookworm statistics and hookworm work in general. It gives me great pleasure to present to this association Dr. Farrell of North Carolina. (Applause.)

Dr. Farrell: The first knowledge that I had that Georgia had a real vital State Medical Association came to me last summer when your state legislature was in session. I happened to be passing through and saw lobbying going on and I knew then that there was a strong State Medical Association back of the activity that was going on at that time. I desire to congratulate you upon the splendid headway you have made towards

setting medical standards in Georgia where they should be.

I have been more highly gratified with the evidence of interest and enthusiasm I have found here this morning among the physicians of Georgia representing all sections of the state. I am glad to know you have set your shoulders together towards the passage of these two medical bills, each of which in itself is of fundamental importance to the welfare of Georgia, to the health of Georgia, to the improvement of the sanitary conditions in Georgia. A Vital Statistics Bill will enable you to have a survey of existing conditions. You will know exactly what the problem is before you, and before you can ascertain whether or not you are making progress in health work you must know where the beginning point is. The importance of the Health Bill, as I see it, is this: You have a state board of health; it has its central office in Atlanta, and a splendid laboratory where excellent laboratory work is done. It can distribute literature throughout the length and breadth of Georgia. The people are saturated more or less with preventive medicine, and before educating the state there must be some one nearer the people, and that is the State Board of Health office. You can use the various agencies in the various counties throughout the state and get co-operation towards improving the unsanitary conditions that exist, ascertain the excessive amount of preventable sickness, do what you can towards the correction of physical defects in children, and carry on those other measures for improving the health of the people.

What can a county health officer do? In the first place, we should have a county health officer who devotes his whole time to the work. Unless one has a knowledge of what a county health officer should do, it is difficult to accomplish those things which we ought to do. It is not an easy position to fill. If private practitioners are permitted to do real health work; if we find half a dozen children who ought to have their tonsils removed, and three of the cases come to us and the others go to some other physician, or if I have to go, in other words, to the physician who is doing health work, immediately some one might say that he is using his official position for his personal aggrandizement; if, however, he be elected for full term, he is a servant of the people and he is not criticised as violating medical

ethics when he finds out the real needs of the people. He goes out among them and in the schools. He secures the co-operation of the educational forces of the press and the influence of citizens throughout the county, and sets in motion something that will mean real accomplishment in health work. There are a great many things he can do. He can make a complete survey and know accurately what the health commissions are. His first work will be to find out exactly what the health problems are. If he has got statistics of morbidity, birth statistics, and mortality statistics, he can make a map which will enable him to know what the whole health problem is. With that definite survey before him he will know exactly where he is beginning, and it would be the point to begin to accomplish something. If this survey is kept along that general principle, you will be able in a month to tell what headway has been made.

The two bills under discussion are very important ones, and having seen what I did last summer, I do not think you need have any fear whatever about the passage of them. They are worth everything they cost and a hundred times more. (Applause.)

The city of Americus has voted to issue bonds for the erection of a municipal hospital.

Dr. Marcellus Cochran of Barnesville has accepted a position in the Macon City Hospital.

The more money The Journal of the Medical Association of Georgia makes out of its advertisements the less it costs the State Association to run the paper. This means that every member of the State Association has an interest in the advertising columns. If one business firm advertises and another does not, patronize the one that does. It is money in your pocket.

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A. A. Barge.....	"
D. A. Haney.....	"
Thos. S. Bailey.....	"
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P. L. Williams.....	"
Ford Ware.....	"
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D. Houseworth.....	R.F.D. 2 Douglasville
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H. C. Willis.....	"
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J. P. Ballenger.....	"
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G. W. Whiteside.....	"
T. B. Bonner.....	"
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G. M. Parker.....	Carnesville
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L. L. Andrews.....	"
E. Bates Block.....	"
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S. T. Barnett.....	"
Marion Benson.....	"
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Chas. E. Boynton.....	"
W. T. Bivings.....	"
H. I. Battey.....	"
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J. L. Campbell.....	"
M. G. Campbell.....	"
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J. S. Derr.....	"
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M. T. Davis.....	"
J. G. Earnest.....	"
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O. F. Elder.....	"
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C. B. Greer.....	Atlanta
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M. Hoke.....	"
F. G. Hodgson.....	"
W. A. Hobbs.....	"
J. C. Johnson.....	"

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H. F. Hope.....	"
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E. C. Thrash.....	"
H. G. Cannon.....	"
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A. E. Wheeler.....	"
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E. C. Murphey.....	"	J. J. Foster.....	College Park
Thos. H. Hancock.....	"	L. F. Wright.....	Atlanta
Andrew F. Quillian.....	"	T. Blake Armstrong.....	"
O. B. Bush.....	"	Homer L. Redd.....	R.F.D. No. 5
J. Cheston King.....	"	Howard Hall.....	"
W. A. Gardner.....	"	Cornelius Ware.....	"
John Wallace.....	"	Henry Grady Carter.....	"
Roy Blosser.....	"	Cornelius F. Holton.....	"
Hansell Crenshaw.....	"	Guy S. Wheelchel.....	"
A. H. Bunce.....	"	Job C. Patterson.....	"
J. D. Thomson.....	"	E. L. Awtry.....	"
Geo. C. Mizell.....	"	Wm. L. Barnes.....	"
D. J. Manget.....	"	John B. Fitts.....	"
A. L. Sawyer.....	"	Emory R. Park.....	"
Chas. F. Benson.....	"	I. N. Stone.....	"
T. D. Longino.....	"	H. N. Kraft.....	"
S. T. Harris.....	"	W. A. Arnold.....	"
H. C. Sauls.....	"	J. H. Neall.....	"
W. E. Barber.....	"	H. G. Estes.....	"
J. H. Kelly.....	"	Robt. W. Todd.....	"
B. C. Duncan.....	"	Chas. P. Ward.....	"
W. R. Roberts.....	"	Chas. J. Vaughn.....	"
J. R. Barfield.....	"	Wm. F. Wiggins.....	"
W. E. Campbell.....	"	Jas. R. Smith.....	"
E. D. Highsmith.....	"	Kimsey E. Foster.....	College Park
G. D. Couch.....	"		
Bernard Wolff.....	"		
D. F. Winn.....	"		
Francis Bradley.....	"		
H. F. Harris.....	"		
W. S. Kendrick.....	"		
L. P. Stephens.....	"		
F. E. Van der Veer.....	"		
H. S. M. Adams.....	"		
G. W. Quillian.....	"		
Dan Y. Sage.....	"		
A. G. DeLoach.....	"		
W. P. Nicholson.....	"		
J. P. Kennedy.....	"		
J. H. Bradfield.....	"		
J. H. Hines.....	"		
J. S. Hurt.....	"		
W. E. Ragan.....	"		
C. W. Gould.....	"		
O. L. Miller.....	"		
Wm. T. Jones.....	"		
A. B. Elkin.....	"		
Calvin Weaver.....	"		
S. B. Vryonis.....	"		
H. J. Rosenberg.....	"		
M. McH. Hull.....	"		
J. R. McCord.....	"		
J. C. Olmsted.....	"		
W. Z. Holliday.....	"		
Geo. H. Noble.....	"		
W. E. Yankey.....	"		
Chas. O. Smith.....	"		
F. M. Sutton.....	"		
T. C. Hodge.....	"		
E. L. Norton.....	"		
Frank Bird.....	"		
B. S. Bomar.....	"		
C. F. Spearman.....	"		
W. T. Asher.....	"		
B. H. Wagon.....	"		
W. A. Jackson.....	"		
C. R. Andrews.....	"		
J. N. Ellis.....	"		
M. C. Pruitt.....	"		
M. A. Massoud.....	"		
F. C. Jones.....	"		
J. W. Roberts, Jr.....	"		
S. C. Redd.....	"		
L. F. Wright.....	"		
J. B. Armstrong.....	"		
Homer C. Redd.....	"		

GORDON COUNTY

		President—W. R. Barnett.....	Sugarvalley
		Sec.-Treas.—C. F. McLain.....	Calhoun
		B. W. Fite.....	Resaca
		W. B. Floyd.....	Plainville
		W. G. Banister.....	Plainville
		E. O. Shellhouse.....	Calhoun
		J. M. Erwin.....	Calhoun
		C. F. McLain.....	Calhoun
		H. L. Erwin.....	Dalton
		W. R. Barnett.....	Sugarvalley
		G. W. Mills.....	Calhoun
		R. L. Rogers.....	Fairmont
		W. R. Richard.....	Calhoun
		M. A. Acree.....	Curryville
		A. L. Horton.....	Ranger

GRADY COUNTY

		President—W. A. Walker.....	Cairo
		Sec.-Treas.—M. M. McCord.....	Whigham
		W. A. Walker.....	Cairo
		M. M. McCord.....	Whigham
		J. A. Lindsay.....	Cairo
		Eugene Clower.....	Cairo
		J. B. Warnell.....	Cairo
		C. H. Maxwell.....	Calvary
		J. F. Webb.....	Whigham
		Leon E. Brawner.....	Whigham

GREENE COUNTY

		President—J. C. Asbury.....	Greensboro
		Sec.-Treas.—Goodwin Gheesling.....	Greensboro
		E. G. Adams.....	Greensboro
		J. C. Asbury.....	Greensboro
		C. O. Copelan.....	White Plains
		H. C. Foster.....	Union Point
		Goodwin Gheesling.....	Greensboro
		J. H. Gheesling.....	Greensboro
		C. C. King.....	White Plains
		W. H. Lewis.....	Siloam
		F. A. Neergaard.....	White Plains
		J. R. Robbins.....	Siloam

GWINNETT COUNTY

		President—O. D. Hall.....	Buford
		Sec.-Treas.—D. C. Kelly.....	Lawrenceville
		O. D. Hall.....	Buford

W. J. Hutchins.....	Buford
W. W. Power.....	Buford
B. D. Rhodes.....	Grayson
W. P. Ezzard.....	Lawrenceville
G. S. Kelley.....	Lawrenceville
D. C. Kelley.....	Lawrenceville
P. O. Mauldin.....	Norcross
H. T. Dickens.....	Lilburn
M. T. Johnson.....	Lawrenceville
Chalmers Hinton.....	Lawrenceville
C. A. Kelley.....	Lilburn
O. O. Simpson.....	Norcross
Joseph Woodward.....	Buford
W. T. Hinton.....	Dacula
B. V. Wilson.....	Dacula
H. T. Smith.....	R.F.D. 3 Lawrenceville
T. P. Hudson.....	R.F.D. Loganville
H. B. Lee.....	R.F.D. 1 Luxomi
J. M. Oliver.....	Grayson

HABERSHAM COUNTY

President—E. H. Lamb.....	Demorest
Sec. Treas.—W. V. Chandler.....	Baldwin
E. H. Lamb.....	Demorest
R. B. Lamb.....	Demorest
D. M. Carter.....	Mt. Airy
W. V. Chandler.....	Baldwin
J. K. Burns.....	Clarksville
J. B. Jackson.....	Clarksville
P. Y. Duckett.....	Cornelia

HALL COUNTY

President—B. W. Lockhart.....	Lula
Sec. Treas.—E. T. Gibbs.....	Gainesville
J. H. Downey.....	Gainesville
A. D. White.....	"
H. L. Rudolph.....	"
J. B. Rudolph.....	"
J. H. McClure.....	"
E. T. Gibbs.....	"
L. R. Bryson.....	"
J. D. Mauldin.....	New Holland
B. W. Lockhart.....	Clermont
Giles Hathcock.....	Lula
J. A. Bryant.....	Gillsville
P. E. B. Robertson.....	Gainesville

HARRIS COUNTY

W. E. Farley.....	Hamilton
M. F. Pennington.....	"
Jas. De Lamar.....	"

HART COUNTY

President—B. C. Teasley.....	Hartwell
Sec. Treas.—W. E. McCurry.....	Hartwell
Geo. S. Clark.....	Hartwell
B. C. Teasley.....	Hartwell
G. T. Harper.....	R.F.D. 7 Elberton
H. P. Shields.....	Bowersville
W. E. McCurry.....	Hartwell
J. I. Jenkins.....	R.F.D. 3 Bowman
D. J. Barton.....	Hartwell
J. C. Jenkins.....	Hartwell
A. P. Ilanie.....	Hartwell

HENRY COUNTY

J. A. Combs.....	Locust Grove
R. L. Tye.....	McDonough

HOUSTON COUNTY

President—O. G. Singleton.....	Ft. Valley
Sec. Treas.—R. L. Carter.....	Perry
O. G. Singleton.....	Ft. Valley

J. D. Story.....	Kathleen
R. L. Cater.....	Perry
M. T. Wise.....	Ft. Valley
W. S. White.....	Ft. Valley
E. T. Evans.....	Bonaire

IRWIN COUNTY

President—S. L. McElroy.....	Ocilla
Sec. Treas.—G. W. Willis.....	Ocilla
W. J. Dismuke.....	Ocilla
J. C. Luke.....	"
S. L. McElroy.....	"
G. W. Willis.....	"
A. Harper.....	Wray
H. P. Lyon.....	Mystic
H. B. Dickens.....	Ocilla

JACKSON COUNTY

President—L. W. Hodges.....	Winder
Sec. Treas.—J. C. Bennett.....	Jefferson
L. C. Allen.....	Hoschton
J. C. Bennett.....	Jefferson
C. O. Broek.....	"
J. G. Elder.....	"
L. G. Hardman.....	Commerce
W. B. Hardman.....	"
F. M. Hubbard.....	"
L. W. Hodges.....	Winder
W. C. Kennedy.....	Talmo
W. L. Mathews.....	Winder
E. M. McDonald.....	Jefferson
M. F. Nelms.....	Commerce
J. B. Pendergrass.....	Jefferson
H. P. Quillian.....	Winder
L. Sanders.....	Commerce
O. E. Shankle.....	"
L. J. Sharp.....	"
S. J. Smith.....	Jefferson
J. C. Verner.....	Commerce

JASPER COUNTY

President—W. N. Bullard.....	Monticello
Sec. Treas.—C. L. Ridley.....	Hillsboro
W. M. Bullard.....	Monticello
F. S. Belcher.....	"
J. V. Davis.....	"
Dr. Pittard.....	"
R. F. Carry.....	"
L. M. Ellis.....	R.F.D. "
C. L. Ridley.....	Hillsboro

JEFFERSON COUNTY

L. P. Farmer.....	Spread
J. D. Peacock.....	Wadley

JENKINS COUNTY

President—L. J. Belt.....	Millen
Sec. Treas.—Q. A. Mulkey.....	Millen
L. J. Belt.....	Millen
R. Y. Lane.....	"
J. L. Kirkendol.....	"
C. Thompson.....	"
B. A. Deal.....	Emmalane
Q. A. Mulkey.....	Millen

JOHNSON COUNTY

President—P. B. Beddingfield.....	Wrightsville
Sec. Treas.—J. G. Brantley.....	Wrightsville
P. B. Beddingfield.....	Route 5 Wrightsville
T. L. Harris.....	Wrightsville
D. C. Harrison.....	Kite
S. M. Johnson.....	Wrightsville
J. W. Brinson.....	"
J. G. Brantley.....	"

JONES COUNTY

President—B. L. White.....	Round Oak
Sec.-Treas.—P. R. Chambliss.....	Gray
B. L. White.....	Round Oak
R. B. Barron.....	Gray
P. R. Chambliss.....	Gray
J. D. Zachary.....	Bradley
J. F. Anderson.....	Bradley
J. H. Riley.....	Haddock

LAURENS COUNTY

President—E. B. Claxton.....	Dublin
Sec.-Treas.—R. J. Chappell.....	Dudley
R. J. Chappell.....	Dudley
W. E. Williams.....	Rockledge
G. F. Green (Honorary).....	Dublin
G. D. Thompson.....	Dexter
W. C. Thompson.....	Dublin
J. H. Duggan.....	Route 1 Irvington
L. J. Thomas (Honorary).....	Dublin
J. L. Linder (Honorary).....	"
T. H. Hall (Honorary).....	"
Sidney Walker.....	"
E. B. Claxton.....	"
J. E. New.....	Dexter
Ezra New.....	Dublin
W. E. Beddingfield.....	Rentz
J. J. Barton.....	Dublin
W. R. Brigham.....	"
J. L. Weddington.....	"
J. M. Page.....	"
Frank Bright.....	Dudley

LINCOLN COUNTY

C. E. Cliett.....	Double Branches
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LOWNDES COUNTY

President—J. C. Pate.....	Valdosta
Sec.-Treas.—J. A. Thomas.....	Valdosta
E. P. Quillian.....	Valdosta
A. Griffin.....	"
V. F. Carey.....	Olympia
G. O. Allen.....	Fargo
J. A. Thomas.....	Valdosta
J. P. Prescott.....	Lake Park
A. G. Little.....	Valdosta
J. C. Pate.....	"
J. M. Smith.....	"
J. C. Wilson.....	"
F. H. Thomas.....	"
D. W. Freeman.....	"
P. C. Quarterman.....	"

MACON COUNTY

C. H. Richardson.....	Montezuma
C. A. Greer.....	Oglethorpe

MADISON COUNTY

W. D. Gholston.....	Danielsville
W. R. McCoy.....	Danielsville

MERIWETHER COUNTY

President—E. B. Terrell.....	Greenville
Sec.-Treas.—F. P. Norman.....	Greenville
J. W. Lambert.....	Luthersville
C. C. Ramsey.....	Luthersville
E. B. Terrell.....	Greenville
F. P. Norman.....	"
J. W. Pinkston.....	"
R. B. Gilbert.....	"
W. P. Allen.....	Woodbury
John L. Dixon.....	"
J. M. Hooten.....	"

V. H. Bennett.....	Gay
W. P. Ellis.....	Gay
T. J. Hatchett.....	Raleigh
E. L. Baker.....	Manchester
V. G. Williams.....	Odessadale
W. H. Goodwin.....	Bullochville
R. H. McDonald.....	Bullochville

MITCHELL COUNTY

A. S. Hargrove.....	Sale City
C. A. Stevenson.....	Camilla
H. G. Fussell.....	"
F. L. Lewis.....	"
J. M. Spence.....	"
W. S. Hill.....	Pelham
J. R. Clements.....	"
Beauregard Williams.....	"
C. W. Reid.....	"
J. L. Brown.....	Camilla

MONROE COUNTY

J. O. Elrod.....	Forsyth
Geo. L. Alexander.....	Forsyth

MONTGOMERY COUNTY

President—W. M. Moses.....	Uvalda
Sec.-Treas.—J. E. Hunt.....	Mt. Vernon
J. W. Palmer.....	Ailey
W. M. Moses.....	Uvalda
R. H. Mobley.....	"
J. C. Collins.....	"
J. H. Dees.....	Alston
J. E. Hunt.....	Mt. Vernon

MORGAN COUNTY

President—J. H. Trout.....	Pennington
Sec.-Treas.—D. D. Trotter.....	Madison
W. M. Fambrough.....	Bostwick
G. M. Dunn.....	Rutledge
J. L. Porter.....	Rutledge
J. H. Trout.....	R.F.D. Pennington

MUSCOGEE COUNTY

President—G. S. Murray.....	Columbus
Sec.-Treas.—F. A. Schneider.....	Columbus
B. W. Allen.....	Columbus
Jas. M. Baird.....	"
Wm. L. Bullard.....	"
Wm. L. Cooke.....	"
Robt. Carter.....	"
J. M. Crook.....	"
John I. Darby.....	"
Chas. A. Dexter.....	"
Wm. T. Gautier.....	"
Russell P. Glenn.....	"
Jas. H. Johnson.....	"
Jas. H. McDuffie.....	"
T. E. Mitchell.....	"
H. Stokes Munroe.....	"
G. S. Murray.....	"
Chas. A. Peacock.....	"
F. A. Schneider.....	"
W. W. Stewart.....	"
Chas. L. Williams.....	"
J. C. Wooldridge.....	"
J. R. Youmans.....	"
S. E. Young.....	Midland
B. B. Jameson.....	Columbus

McDUFFIE COUNTY

President—S. Gibson.....	Thomson
Sec.-Treas.—B. F. Riley, Jr.....	Thomson
Sterling Gibson.....	Thomson

A. J. Matthews.....	Thomson
B. F. Riley, Jr.....	Thomson
D. A. Rogers.....	Dearing
J. R. Sams.....	Dearing

NEWTON COUNTY

President—S. W. Everett.....	Almon
Sec. Treas.—O. L. Holmes.....	Covington
S. W. Everett.....	Almon
J. H. Randall.....	Porterdale
O. L. Holmes.....	Covington
J. C. Smith.....	Mansfield
A. C. Perry.....	Covington
W. Z. Anderson.....	Covington
W. D. Travis.....	Covington
B. H. H. Ward.....	Oxford

OCMULGEE COUNTY

President—A. A. Smith.....	Hawkinsville
Sec. Treas.—R. G. Stone.....	Hawkinsville
J. J. Anderson.....	Hawkinsville
E. C. Brown.....	"
W. A. Mathews.....	"
A. A. Smith.....	"
J. J. Stone.....	"
J. R. Rose.....	Elco
J. B. Kelly.....	Macon
R. J. Morgan.....	Cochran
C. E. Taylor.....	"
R. L. Whipple.....	"
T. D. Walker, Jr.....	"
J. F. Powell.....	Gresston
J. N. Roland.....	Yonkers
J. K. Maloy.....	Milan
H. A. Hermann.....	Sandersville
J. B. Clark.....	Eastman
J. C. Wall.....	"
J. D. Herman.....	"
F. H. Herman.....	"
E. L. Smith.....	Plainfield
W. H. Born.....	McRae
B. M. Kennon.....	McRae
J. W. Neal.....	Scotland
H. S. Maloy.....	Milan

OCONEE COUNTY

President—Jas. T. Elder.....	Bishop
Sec. Treas.—Wm. M. White.....	Watkinsville
E. H. Kennimer.....	Bishop
Jas. T. Elder.....	Farmington
S. A. Elder.....	High Shoals
Wm. M. White.....	Watkinsville

PAULDING COUNTY

President—E. H. Robertson.....	Dallas
Sec. Treas.—J. I. Matthews.....	Dallas
E. H. Robertson.....	Dallas
J. I. Matthews.....	"
W. O. Hitchcock.....	"
W. H. Beall.....	"
E. W. Dean.....	Hiram

PIKE COUNTY

J. C. Beauchamp.....	Williamson
W. L. Beauchamp.....	Williamson
C. H. Willis.....	Barnesville
J. M. Anderson.....	Barnesville

POLK COUNTY

President—C. W. Peck.....	Cedartown
Sec. Treas.—M. S. Richardson.....	Cedartown
M. S. Richardson.....	Cedartown
J. E. Pennington.....	Esom Hill

W. G. England.....	Cedartown
W. W. Tison.....	"
J. A. Liddell.....	"
S. L. Whitely.....	"
C. V. Wood.....	"
J. C. Trentham.....	R.F.D.
C. W. Peck.....	R.F.D.
J. J. Cooper.....	"
J. W. Good.....	"
H. M. Hall.....	"
W. A. Chapman.....	"

PUTNAM COUNTY

President—V. H. Taliaferro.....	Eatonton
Sec. Treas.—S. A. Clark.....	Eatonton
S. A. Clark.....	Eatonton
E. F. Griffith.....	"
V. H. Taliaferro.....	"
J. D. Weaver.....	"
E. Y. Walker.....	Willard

RABUN COUNTY

President—J. C. Dover.....	Clayton
Sec. Treas.—L. Neville.....	Rabun Gap
J. C. Dover.....	Clayton
J. A. Green.....	Clayton
L. Neville.....	Rabun Gap

RANDOLPH COUNTY

President—F. S. Rogers.....	Coleman
Sec. Treas.—F. G. Barfield.....	Cuthbert
T. H. Andrews.....	Cuthbert
F. G. Barfield.....	Cuthbert
A. L. Crittenden.....	Shellman
W. W. Crook.....	Cuthbert
T. F. Harper.....	Coleman
F. M. Martin.....	Shellman
E. C. McCurdy.....	Shellman
G. Y. Moore.....	Cuthbert
F. D. Patterson.....	Cuthbert
F. S. Rogers.....	Coleman
J. B. Tanner.....	Benevolence
A. F. Weathers.....	Shellman

RICHMOND COUNTY

President—J. M. Hull.....	Augusta
Sec. Treas.—Asbury Hull.....	Augusta
W. W. Battey, Jr.....	Augusta
G. T. Bernard.....	"
C. W. Crane.....	"
W. D. Cutter.....	"
A. A. Davidson.....	"
A. J. Kilpatrick.....	"
W. C. Lyle.....	"
N. M. Moore.....	"
W. A. Mulherin.....	"
T. E. Oertel.....	"
G. A. Traylor.....	"
J. B. Wright.....	"
C. J. Montgomery.....	"
J. R. Littleton.....	"
H. W. Shaw.....	"
C. I. Bryans.....	"
A. J. Deas.....	"
W. T. Price.....	"
R. V. Lamar.....	"
J. E. Allen.....	"
P. P. Comey.....	"
W. H. Goodrich.....	"
W. E. Houston.....	"
W. C. Kellogg.....	"
M. S. Levy.....	"
G. A. Wilcox.....	"
E. A. Wilcox.....	"

W. H. Harrison, Jr.	Augusta
E. P. Rice	"
H. M. Michel	"
J. C. Wright	"
J. R. Robertson	"
Geo. T. Horne	"
J. H. Honan	"
H. H. Malone	"
J. M. Hull	"
Asbury Hull	"
F. X. Mulherin	"
K. W. Milligan	"
W. D. Jennings, Jr.	"
Hugh N. Pgae	"
L. P. Tessier	"
W. H. Doughty, Jr.	"
T. D. Coleman	"
E. E. Murphey	"
J. A. Johnston	"
T. R. Wright	"
R. I. Bryson	"
J. R. Lewis	"
J. H. Hudson	"
R. E. Corley	Hepzibah
J. M. Caldwell	Augusta
H. J. Eve	"
H. J. Baker	"
J. F. Burdashaw	"
F. G. Kershaw	"
A. C. Wade	"

ROCKDALE COUNTY

President—C. H. Turner	Conyers
Sec. Treas.—P. S. Smith	Conyers
J. A. Guinn	Conyers
C. H. Turner	"
E. P. Bryan	"
P. S. Smith	"
D. H. Parliament	"

SPALDING COUNTY

President—W. C. Miles	Griffin
Sec. Treas.—W. H. Austin	Griffin
E. R. Anthony	Griffin
W. H. Austin	"
Webb Conn	Sunnyside
T. E. Drewry	Griffin
N. B. Drewry	"
G. F. Johnson	"
W. C. Miles	"
T. J. Nunnally	"
T. J. Phillips	"
J. M. Thomas	"
C. L. Tucker	"
L. C. Warren	"
W. N. Bines	Zetella
M. F. Carson	Griffin

STEPHENS COUNTY

President—J. E. D. Isbell	Toccoa
Sec. Treas.—C. L. Ayers	Toccoa
W. L. McBath	Avalon
John Edge	Toccoa
Jeff Davis	Toccoa
W. H. Parker	Mize
J. E. D. Isbell	Toccoa
John Terrell	Toccoa
F. M. Lothridge	Toccoa
Jas. H. Crawford	Martin
C. L. Ayers	Toccoa
T. C. Clodfelter	Martin

STEWART COUNTY

President—J. F. Lunsford	Preston
Sec. Treas.—M. Walton	Lumpkin

W. S. Armor	Renfroes
J. F. Lunsford	Preston
G. G. Lunsford	Weston
R. L. Grier	Lumpkin
J. M. Kenyon	Richland
W. F. McCurdy	Richland
W. C. Sims	Richland
M. Walton	Lumpkin
T. P. Russell	Richland
C. E. Pickett	Richland
A. G. Fort	Atlanta
O. A. Bruneau	Lumpkin
J. O. Baldwin	Omaha
J. H. Foster	Preston
J. S. Wimberly	Lumpkin

SUMTER COUNTY

President—J. R. Statham	
Sec. Treas.—D. B. Mayes	Americus
R. E. Cato	Americus
Frank Cato	Americus
S. P. Wise	Plains
J. W. Chambliss	Americus
J. T. Stukes	Americus
D. B. Mayes	Americus
A. J. Kemp	Leslie
W. T. Simpson	Smithville
H. T. Simpson	Smithville
J. C. Logan	Plains

TALIAFERRO COUNTY

John A. Rhodes	Crawfordville
L. R. Brown	Sharon
A. H. Beasley	Crawfordville
A. C. Davidson	Sharon

TATTNALL COUNTY

President—S. F. Smith	Glennville
Sec. Treas.—L. A. De Loach	Glennville
O. L. Alexander	Reidsville
D. S. Clanton	Hagan
B. E. Daniel	Claxton
J. W. Daniel	Claxton
L. A. De Loach	Glennville
S. T. Ellis	Hagan
G. W. Elarbe	Daisy
T. M. Edwards	Daisy
J. M. Hughes	Glennville
J. C. Harris	Collins
J. L. Kennedy	Manassas
J. J. Kennedy (Honorary)	Collins
L. V. Strickland	Cobtown
J. J. Watkins	Lew
B. E. Miller	Claxton
G. W. Tootle	Glennville
S. F. Smith	Glennville
H. Bowen	Cobtown
T. G. Moore	Cobtown
C. B. Walling	Collins
C. C. Whittle	Reidsville
F. W. McCall	Reidsville

TERRELL COUNTY

Sec. Treas.—J. G. Dean	Dawson
J. W. Patterson	Dawson
O. T. Kenyon	"
L. Thomas	R.F.D. "
G. Chappell	"
J. G. Dean	"
R. S. O'Neal	Branwood
L. Lamar	Dawson
J. H. Lewis	"

THOMAS COUNTY

Sec.-Treas.—A. D. Little.....		Thomasville
J. N. Isler.....	Meigs	
S. E. Sanchez.....	Barwick	
L. L. Lundy.....	Barwick	
W. B. Watkins.....	Metcalfe	
H. A. Vann.....	Boston	
J. B. Threat.....	Pavo	
Harry Ainsworth.....	Thomasville	
C. H. Ferguson.....	"	
W. W. Jarrell.....	"	
J. B. Palmer.....	"	
A. D. Little.....	"	
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A STUDY OF GASEOUS OEDEMA.*

Howard J. Williams, A.M., M.D., Macon, Ga.

One of the most malignant and rapidly fatal of germ infections the surgeon is apt to encounter is gas oedema, or the infection of wounds by the *Bacillus Aerogenes Capsulatus*. Since 1899 the writer has encountered this complication in four cases, and as each case illustrates a different source of infection and a different lesion affected, they are offered as a study of the pathological processes involved in the disease.

The *Bacillus Aerogenes Capsulatus*, first discovered microscopically and isolated by animal inoculation by Welch, and declared by him to be the sole cause of gas oedema, is an anaerobic bacillus commonly found in the soil, in hospital dust or dirt, in the intestinal contents of man and animals, and at times upon the skin. It therefore most commonly infects compound fractures and open wounds which come in contact with earth and exposed intestinal excretions of either man or animals; and it sometimes complicates operations upon the gut or perineum, abortions and puerperal conditions, and occasionally gunshot wounds.

By far the largest percentage of infections from this germ occur in wounds which have become contaminated with earth. Of sixty-four cases collected and reported by August F. Jones (*American Practice of Surgery*, Volume 2, page 460), twenty-five were cases of compound fractures. The first case the writer encountered was of this character.

Gas Oedema, Complicating Amputation Following Compound Comminuted Fracture (Complete Crush) of the Knee.

W. B., male, negro, 61 years of age, stone-cutter, July 26, 1899, while unloading a granite block weighing 1,000 pounds, had his left knee crushed by the stone falling on the limb, burying the limb in the ground. Amputation in the lower third of the thigh within two hours in the Macon Hospital; some of the bruised tissues were used in the flaps. Patient did well for forty-eight hours. During the night of the 28th he complained of great weakness, pain in the stump, sweating and chilliness. He rapidly developed delirium, stentorous breathing and coldness of the surface of the body. In a few hours the limb swelled to the size of his body with erepitis upon palpation. Dressings removed, stump swollen but not discolored. Incisions of stump followed by escape of foul

*Read at meeting of Medical Association of Georgia, Atlanta, Ga., 1914.

smelling gas. Emphysema rapidly extended up into the body, from the thigh to the armpit. Temperature 103 degrees, pulse 140, respiration 20 to 40. Death 7:30 p. m., July 29th, twenty-four hours after oedema began and four days after the accident.

This was the first case of infection by *Bacillus Aerogenes Capsulatus* attending amputation for compound fracture ever occurring in the Macon Hospital. A second case occurred after amputation a few years later in the service of Dr. O. H. Weaver, and a rather remarkable coincidence appears in the fact that the second accident occurred in the same locality in which the writer's patient was injured.

As an illustration of the fact that this bacillus can be transmitted into healthy tissues by the exposed intestinal contents of the human being, the writer's second case is reported.

Gas Oedema, Complicating Subcutaneous Infusion for Secondary Hemorrhage Following Operation for Hemorrhoids.

W. A. G., male, negro, 55 years, preacher, was operated April 8, 1902, in the Macon Hospital, for sloughing hemorrhoids. Patient did well for eight days, when he suddenly developed a violent hemorrhage from the bowels, with some collapse at 10 p. m., April 15th. For this collapse two subcutaneous saline infusions were administered at 4 and 6 a. m. April 16th. In the haste to stimulate the patient "a ward enema can" without sterilization was used. At 3 p. m. April 16th the patient was in collapse, cold sweats, delirious, temperature 102.2, pulse 136, respiration 32. Surrounding the two points in the mammary region where the infusions were performed, swelling with crepitation of the skin and sloughing of one of the points of injection soon developed. The emphysema rapidly spread over the entire chest and into the connective tissues of the neck. Death April 17th, 8 a. m.

There can be no question as to the route of germ transmission in this case and it should be a warning to all resident physicians and nurses in hospitals. In Jones' article, mentioned above, there are records of three other cases following saline infusions.

That the bacillus may be transmitted from the intestinal excretions of the lower animals to the open wounds in the human being is well illustrated by the writer's third case.

Gas Oedema Complicating Stable Lot Infection.

J. R. C., male, white, 54 years, merchant and farmer, was admitted to the Macon Hospital, November 21, 1910, 4:15 a. m., from a neighboring town, with the following history:

For several years he had used for toilet purposes corn-cobs in his stable lot without any discomfort; but on November 18, 1910, he felt an acute pain in the region of the anus several hours after his morning toilet, to which he paid no attention. In the evening this pain developed into an acute soreness, and in the morning of the 19th it had increased to such an extent that he called his family physician who made an examination, and prescribed a simple salve to relieve the swelling and soreness around the anus. In the course of conversation with his physician he mentioned the fact that he had been having a small sore in the perineum which he had bruised with the cob, and thought this was the cause of the pain and soreness. By the morning of the 20th the trouble had become so much aggravated he took to his bed and was very sick.

When admitted to the hospital, his pulse was 130, temperature 99.5, respiration 36, patient semi-delirious, skin dry and harsh, abdomen distended and tender, retention of urine, and great pain in the perineal region.

At 10:30 a. m. he was placed on the operating table and the perineum exposed. The tissues surrounding the anus, perineum and scrotum were discolored, swollen, indurated and crepitating on pressure over an area of 4 to 5 inches in diameter. Incisions were made into the right and left ischio-rectal spaces and into the post scrotal regions, which were accompanied by the escape of gas giving forth a hissing sound and a dark brown, offensively smelling fluid. A diagnosis of infection due to *Bacillus Aerogenes Capsulatus* was made, and a fatal prognosis given.

The patient did not react and died at 4 p. m. November 21st, five and a half hours after operation and on the fourth day of his infection.

G. E. Brewer in the *Annals of Surgery*, June, 1901, reports a similar case of gas oedema in the ischio-rectal space and vulva of a woman, but gives no account of the source of the infection, however, the natural

inference is that the infection came from her own intestinal contents.

Jones reports two cases due to operation upon the intestinal tract. The writer's fourth case is of this character.

Gas Oedema Complicating Laparotomy for Intestinal Strangulation.

Mrs. L. C. B., female, white, 68 years, housewife, was admitted to the Williams Private Sanatorium January 21, 1914, 2:45 p. m.; temperature 98.1, pulse 104, respiration 21; heavy trace of albumen with hyaline and granular casts in the urine; blood counts 10,800 white cells; abdomen distended and acutely painful, nausea with vomiting of dark brown fluid. She had been sick for twenty-four hours and unable to have an evacuation from the bowels, following a sudden and acute development of pain in the abdomen.

No relief followed repeated enemata. She was taken to the operating room at 8:30 p. m. and a median laparotomy performed. An acute volvulus of the ilium was found and easily released. The engaged portion of the intestine, about ten inches, was very much discolored, but rapidly regained its color upon relieving the volvulus. No puncture of the intestine to relieve the gaseous distention was made; the bowels were readily replaced in the abdominal cavity, and the abdominal walls were closed without drainage. The stomach was washed out with a solution of bicarbonate of soda, and an ounce of castor oil was left in the stomach after gastric lavage, before she was taken from the operating table.

From the date of operation to the afternoon of January 28th, all of the symptoms pointed to a favorable convalescence; abdominal distention absent and fecal evacuations free.

January 28th she complained of feeling weak and exhausted, pulse became feeble and facial expression anxious. During the afternoon the nurse reported that the right side of the chest and abdominal walls were rapidly swelling without any pain or discomfort to the patient. Upon physical examination, crepitation of the subcutaneous tissues could be easily elicited and an abnormal tympanic sound over the right axilla and chest could be elicited. Some abdominal distention without tenderness was found, and exposure of the laparotomy wound showed redness of the surface along the line of incision. The

stitches were removed. A diagnosis of gas oedema made and an unfavorable prognosis given the family.

In six hours the wound had partially opened and a thin brown offensive secretion began to be discharged, with escape of gas, from the subcutaneous tissues of the abdominal walls. The patient lingered from January 28th until February 2nd, five days, when she died apparently from exhaustion. During the entire time of this gas oedema she never lost her mental activity, her temperature varied between 97 and 101.2, pulse 106 and 124, respiration 22 and 42.

In reviewing the laboratory finding of the case, we found that on January 29th, the day after the development of the gas oedema, the urine still showed hyaline and granular casts with increased albumen; there was an increase of the white blood cells to 16,000, with 85 per cent of polymorphonuclear cells. Upon examination of the fluids from the abdominal wound a capsulated organism was found under the microscope which corresponded with the *Bacillus Aerogenes Capsulatus* of Welch. Some of the secretions from the abdominal wound were submitted to Mr. T. F. Sellers, city bacteriologist, who submitted the following conclusion in his findings in the case:

"The morphology and staining property in the original pus, together with the gas production in the pig, would indicate strongly that the organism in question was the *Bacillus Aerogenes Capsulatus*, sometimes known as the *B. Welchii*. The failure, however, to isolate the germ on artificial media prevents absolute proof of the above conclusion."

At the time of operation in this case there was not any abrasion of the intestines, the volvulus was easily released and the intestines readily replaced in the abdominal cavity, so that no escape of fecal matter could have occurred. After the operation no radical solution of the gut could have occurred for free fecal and gaseous evacuations per ani were easily obtained. The escape of the bacillus from the intestines into the peritoneum and tissues of the abdominal walls must have occurred through the engorged tissues of that portion of the ilium incarcerated in the volvulus. Welch states that the *Bacillus Aerogenes Capsulatus* may pass through the intestinal walls and can be found in the peritoneal cavity in pure culture, and also that the germs may remain in the tissues

without developing manifestations of the infection from eight hours to a week or ten days. That the infection could not have been traced to the catgut used, or other faulty technique in the operation, is demonstrated by the fact that on the same day two other laparotomies were performed without the slightest infection. A case of gas oedema following an operation for incarcerated inguinal hernia, performed by Dr. W. J. Little a few years ago, is on record at the Macon Hospital.

Gas oedema has been reported in two cases of purpural septicaemia observed in the New York Hospital, and several cases are on record following abortions. The bacillus evidently, in these cases, having reached the peritoneal cavity through the intact intestinal walls.

In reviewing the symptomatology of this infection, the local manifestations of its presence can alone be relied upon for a diagnosis. The gas usually forms early and spreads rapidly without much local inflammatory reaction. The period of incubation is usually within eight hours, but may be delayed a week or ten days. In Case 2 and 3 of the writer's cases the emphysema was evidently apparent within twelve hours; in Case 1 it was delayed forty-eight hours, and in Case 4 the patient was apparently doing well for eight days. There is always swelling beginning about the wound and rapidly spreading in the subcutaneous tissues. Upon palpation a distinct sense of crepitation or crackling of the tissues is easily demonstrated; if there is no external wound this is the only early evidence of the infection. If there is a wound there is present an early redness of the edges of the wound rapidly spreading and changing slowly into the dark brown discoloration of gangrene. If the swollen tissues are incised there is a discharge of foul smelling gas which escapes with a distinct hissing or explosive sound. Usually there is no pain on palpating the emphysematous area. Upon incisions into the oedematous regions there is always an escape of brownish, frothy, watery fluid, having a distinctly fetid odor. If there is an external wound this fluid constantly exudes. If the secretions from infected area be examined with proper staining under the microscope the *Bacillus Aerogenes Capsulatus* will be found.

While the local reactions and signs are quite marked, the constitutional symptoms

are not striking. In the rapidly fatal cases there is an anxious expression of the countenance with profound depression, profuse sweating, high temperature and possibly a chill and a rapidly running pulse quickly followed by death. In other cases where the reaction is slower, the pulse, temperature and respiration are not so elevated, chills and sweating do not appear, the evidences of collapse may not be present, and the mind is not much affected; death may be delayed for days. In Cases 1 and 2 of the writer's record the process was rapid and the constitutional symptoms marked, the duration of the process lasting less than forty-eight hours; in Case 3 the disease lasted four days with moderately violent symptoms; in Case 4 the patient lived five days after the oedema appeared, the constitutional symptoms being mild.

Leukocytosis, according to A. B. Johnson, is never very high, the tissues and blood reacting but feebly to stay the ravages of the infection, the polymorphonuclear cells are, however, always high. In Case 4 the white cells rose from 10,800 of second day of the volvulus to 16,000 with 85 per cent of polymorphonuclear in the early stages of gas oedema.

In considering the diagnosis of the infection, aside from the presence of the characteristic foul smelling gas in the tissues, bacteriological examination of the secretions from the infected area, laboratory culture and animal inoculation must be resorted to in order to form a complete history of the infectious process. The infection is fatal usually for guinea pigs, mice and pigeons, while it is slightly so for rabbits; and the *Bacillus Aerogenes Capsulatus* is readily found in their tissues after death following inoculation. In laboratory cultures with proper media the gas is readily developed.

The one germ which has been most often confused with the *Bacillus Aerogenes Capsulatus* is the "Vibrio Septique" of Pasteur, which it closely resembles. Gould states that "Vibrio Septique is extremely rare, only five cases of this infection having been reported." The following table will show the differences between the *Bacillus Aerogenes Capsulatus* and *Vibrio Septique*:

Bacillus Aerogenes Capsulatus.

Short thick rod.	Anaerobic (strictly).
Capsulated.	Gas producing.
Non-flagellated.	Non-liquifying.
Non-motile.	Gram stain.
Sporogenous.	Occurs singly or in pairs.
Capsule, Gentian Violet staining.	

Vibrio Septique.

Large rod.	Anaerobic.
Non-capsulated.	Gas producing.
Flagellated.	Liquefying.
Motile.	Gram stain.
Sporogenous.	Occurs in chains.

A few cases of gae oedema have been reported as due to *Bacillus Proteus* and *Colon Bacillus*, but the absence of anaerobic culture and animal inoculation has thrown doubt on the accuracy of their bacteriological conclusions.

There have been no recorded cases of spontaneous recovery from this infection; the only cases in which recovery has taken place are those in which prompt high amputation has been performed, and possibly in wounds of other portions of the body in which radical treatment has been instituted. Jones gives the mortality as 50 per cent, but the violence of the infection and the rapidity of death makes it questionable if this prognostic estimate is correct. Cases developing slowly are claimed to give a better prognosis than those with rapid onset.

In the treatment of the infection, early high amputation is advised in wounds of the extremities. In wounds occurring elsewhere, thorough cleansing with prompt disinfection and early wide incision is recommended. Theoretically, in the suspicion of a mixed infection, the subcutaneous use of the mixed baeterins should be employed. Constitutionally, supporting stimulating and tonic treatment should be instituted and a nutritious diet employed.

DISCUSSION ON THE PAPER OF DR. WILLIAMS.

Dr. E. C. Davis, Atlanta: It was my hope that Dr. Williams would offer some remedy which might be of benefit in relieving this condition. His experience has been in absolute accord with that of others who have had experience with the gas bacillus infection, because it is promptly followed by death. No method of treatment has been devised which has been of distinct benefit in rectifying the condition when infection takes place. The only thing is the prophylactic method and avoid the possibility of such infection, which is the only means of being of benefit to these patients. Fatality has been the inevitable rule in these infections, and usually a prompt fatality when infection has taken place. The duration of five or six days is unusual, as was Dr. Williams' experience. These cases

of infection usually succumb, as he noted, within a few hours. The helplessness of the situation seems to tie the surgeon's hands when he first observes the development of this condition when it is found.

I wish to congratulate Dr. Williams upon the paper and particularly upon the candor in which he has made clear the insufficiency of our present day knowledge in trying to handle cases of gas bacillus infection, and I hope some means may be devised or some baeterin or some immunizing means which will overcome this tendency. Our present methods have been entirely worthless.

Dr. William S. Goldsmith, Atlanta: I enjoyed Dr. Williams' paper very much because it not only brings forward a distressing infection about which we seem to be helpless in controlling, but which we are also helpless in preventing.

Personally I have seen three cases of gas edema following amputation as the result of crushing injuries of the extremities. In some the infection appeared in a few hours. All of them died. Multiple incisions were made, the wound was opened thoroughly and freely. It is several years since I saw the last case. If I had to deal with the same condition I think I would immerse the limb in a strong iodine solution. Since we have been using iodine solutions in emergency surgery, I think we have seen a material diminution of other infection, particularly tetanus, and I have no doubt the cleansing of wounds with iodine will prevent to a large degree the development of this peculiar infection. The laboratory has given the surgeon very little or no help in dealing with this condition.

Dr. J. R. B. Branch, Macon: I saw some of the cases Dr. Williams has reported in his paper, and the result, as he says, was promptly fatal. One of his cases lived five days. One of the cases he alluded to was even more unusual than that. This patient had a compound comminuted fracture of the lower leg, amputation was done, and four or five days following the amputation the gas bacillus infection took place. It extended gradually up to the axillary region, it was a right-sided injury, and the patient lived eight or nine days following the onset. As a matter of fact, recovery was hoped for in the case. The wound was opened widely and iodine was liberally used, but the patient died when it was thought he was going to recover.

Dr. Williams, in Closing: The fatality is due to the fact that the system is knocked out on account of the general systemic condition. Where we fear a mixed infection, I think possibly a mixed bacterin might be of some benefit for the condition. Certainly, local treatment so far has been almost useless. There is a report of thirty recoveries in the list of Jones.

In a recent issue of the Journal of the American Medical Association four cases of infection were reported, but in only one of them was the gas bacillus found. It is possible some other germ may have been mistaken for the gas bacillus. The colon bacillus has been mistaken for it. In those cases where the colon bacillus has been found it is possibly a mixed infection, and the laboratory man only found the colon bacillus.

A FEW STATISTICS ON THE PRESENT STATUS OF PEDIATRIC TEACHING IN THE SIXTEEN SOUTHERN STATES FORMING THE SOUTHERN MEDICAL ASSOCIATION.*

Clarence A. Rhodes, M.D., Atlanta, Ga.

It is generally believed that pediatrics as a specialty is not receiving the attention it should by the profession of the South, and that our medical schools are lacking in teaching facilities in this branch of medicine.

In order to get the facts in reference to the equipment of the Southern medical schools for teaching pediatrics, I directed a questionnaire to the deans of all the medical schools in the sixteen Southern states forming the Southern Medical Association, requesting them to refer the questionnaire to the heads of the pediatric departments for reply, stating at the same time that the questions might seem rather personal, but a reply to those meeting with their approval would be appreciated and no names of schools or individuals would be used.

It might be well to state that there were thirty-seven medical schools in the above area, according to the January 18, 1913, number of the Journal of the American Medical Association, which classification is used in this paper. Of the thirty-seven schools, only eleven replied, and their standing was as follows: Two were in class plus A, six in class A, and three in class B. Since this

classification by the Journal several of these schools have combined or otherwise have raised their standards, so now they are in class A.

Three of the schools replying only give the first and second years, consequently they have no pediatric department. This leaves only eight schools replying from which to report statistics, and it will be gratifying to know that the best schools of the South will rank along with any of our country, as shown by the following facts:

Of the eight schools considered, seven have professors of pediatrics, while the other has a lecturer.

The ages of the professors range from thirty-two to sixty years, the average being forty-three and one-half years, showing the teachers of pediatrics to be in the prime of life.

Six of these professors hold degrees from a literary college, while two have only high school educations.

All have medical diplomas from schools which at present rank as class A, except one, who did not mention his school.

All have had general hospital training from one to nine years, the average being one and one-half years. All had served as internes in a children's hospital from six months to two years, with the exception of two, whose children's service was limited to their general hospital work.

The length of time they have been teaching ranges from one to sixteen years, the average being eight and one-half years.

Five limit their practice to pediatrics, two also do general practice, and one limits his practice to pediatrics and internal medicine, thus showing that the large majority give most of their time to their specialty.

The following reasons are given for their taking up pediatrics as a specialty: Four because they like it; one gives no reason; one because he has always been connected with a children's hospital; one because it is closely allied to internal medicine; another because in reorganizing the school he was offered that chair.

Five have studied abroad; five have taken post-graduate courses either in this country or abroad, some taking them yearly.

The number of hours required for graduation in the various schools are as follows: The courses are given during the last two years. (a) Two hours weekly, (b) five hours weekly, (c) eight hours weekly, (d)

*Read at meeting of Medical Association of Georgia, Atlanta, Ga., 1914.

sixty-five hours compulsory to three hundred hours elective, (e) one hundred and twenty hours, (f) one hundred and fifty hours, (g) one hundred and ninety-seven hours, (h) not stating the requirements of his school.

Six of these schools have a children's hospital or ward at their disposal for teaching purposes; two have none. The number of clinical cases shown during the course ranges from fifteen to a thousand.

Seven of these schools maintain a free pediatric clinic; five of these clinics are well patronized by the poor of their cities. To these clinics the professor of pediatrics gives his personal attention, he or his assistants giving from two hours weekly to one hour daily to this free work.

Six of the schools have good laboratory facilities for teaching purposes; one for only simple examinations, as urine, etc.; one has none. All make use of the laboratory in teaching. All claim to have good hospital and teaching equipment, but more money is needed to make the equipment entirely satisfactory. Four state that their equipment is satisfactory to carry on investigation and research work. All of the professors hold positions as attending pediatricists to from one to three hospitals, giving them plenty of material for bedside instruction.

Five state that they are endeavoring to better the general pediatric conditions of their cities. Five are taking active interest in the Child's Welfare and the Study and Prevention of Infant Mortality movements.

Those replying to the questionnaire think the subject of pediatrics is not receiving the attention it should in the South and all admit there should be an organization of some kind in order to get together and work out our problems and put pediatrics on the plane it should occupy. All are active members of various medical organizations and have written articles on various pediatric subjects and are willing to use their influence to perfect a pediatric organization of some definite character in the South.

The schools from which replies were received are located in eight states, one state having three, another two. This shows that colleges from only one-half of the Southern states forming the Southern Medical Association replied to the questionnaire, and in justice to those which replied it might be said they are the South's best medical schools and three of these do not teach pediatrics.

The A. M. A. classification of the thirty-

seven medical schools in the sixteen Southern states, previously mentioned in this paper, are as follows: Class A plus, four; class A, fourteen; class B, nine; class C, ten. With this number of medical schools, and no more interest than has been and is being shown in pediatrics in the South, there must be something radically wrong with the specialty or with the men who are representing it in our schools. Now why do these conditions exist? It is because pediatrics is a comparatively new specialty, or is it because the men who are teaching this subject have not been trained in the specialty, or is it a lack of education on the part of the profession and laity to recognize its scope and importance? I believe that all of these factors enter into the lack of progressiveness in Southern pediatrics.

DISCUSSION ON DR. RHODES' PAPER.

Dr. W. A. Mulherin, Augusta: I have enjoyed this paper very much and especially the statistics he brought out in regard to pediatrics. I am afraid we do not give enough time and attention and serious thought to the study of pediatrics throughout Georgia or the South. I do not say that in any way disparagingly, but if we will make a practical proposition of it, a good deal can be accomplished. As general practitioners, it is fair to assume that one-fifth of your practice is among children; by that we mean from the age of one up to sixteen, or one-fifth of your practice is among children. Do we give one-fifth of our time to studying children and their diseases? I do not think we do. It is true a good deal can be learned about children in the medical journals, but the importance of it I do not think can be emphasized too much.

Another practical point to be brought out in connection with pediatrics is the mortality. Of the enormous mortality, 20 to 25 out of every 100 deaths occur in the first year of life, and 50 per cent of them are from gastrointestinal troubles that are preventable. That ought to emphasize the importance of pediatric practice, and it is not said in a spirit of fault-finding, but more to encourage the study of pediatrics. I am mighty glad practitioners are giving more and more attention to it throughout the South. In the medical department of the University of Georgia we are making our course quite strong and turn-

ing out men well trained in pediatries. My object in speaking was to emphasize the importance of studying and paying more attention to the practice of pediatries.

CACODYLATE OF SODA: METHODS OF ADMINISTRATION AND REMARKS ON THERAPEUTICS.

J. T. Stukes, M.D., Americus, Ga.

The first arsenical preparation I used was Atoxyl. I gave it by hypodermic injection in 1910. The results impressed me with the value of this method of administration of arsenic. On account of the tendency and the power this drug has in the production of optic and retinal inflammations, I always felt apprehensive in administration of large doses over a prolonged period. Recently I have given much cacodylate soda and a little cacodylate iron. On account of pain and sometimes infiltrations resulting, I began use of cocain about a year ago, and have found this method satisfactory: I prepare one per cent cocain in boiled, freshly distilled water. I do not distill water, but obtain from an ice plant, or allow a piece of ice to melt in a clean vessel, boil water, bottle and cork, and keep bottle wrapped in a clean towel. I carry in my satchel an alcohol lamp; over this I boil a spoonful of water, hold my needle in it, then rinse syringe and allow hot water to remain in syringe for a few minutes. Touch skin with tincture iodine. Inject beneath skin twelve to twenty-four drops cocain solution, the quantity of solution determined according to dose of cacodylate. One drop for every half grain of cacodylate soda is usually sufficient. I also consider the possibility of cocain idiosyncrasy. A small woman of nervous temperament often shows a susceptibility to this drug, therefore I am cautious and especially so with the first injection, which is essentially tentative, a small dose and recumbent posture being maintained for few minutes after receiving same. When twelve drops or more of cocain solution is injected and followed by pallor, nausea, dizziness or sighing respiration, patient should be immediately placed in recumbent position and given fresh air. Cocain and cacodylate of soda are incompatible; for this reason I facilitate absorption, placing a piece of plain cotton or gauze over injection and making gentle pressure for few minutes. Rinse syringe with spoonful of

boiled water, fill syringe from ampule of cacodylate and inject through same puncture, making sure that every drop is delivered beneath the skin. Withdraw needle quickly, catch up skin with puncture, pinch it to help seal it. I make interval of not less than ten minutes between injections of the two fluids. These injections are made every two or three days until either three or four are received, according to indication, size of dose, susceptibility to arsenic or tolerance of the drug. When you are within the limits of safety is the important question. After this third or fourth dose injections are discontinued seven to ten days for elimination. I have had no abscesses or ulcers. I am told the muscles of the back take care of these injections nicely. I have not given it in the muscles, but recently I have given it intravenously, and now this is my choice of methods.

Intravenous Injections.

Most of my patients prefer the intravenous method when they are assured of a rigid asepsis and because it is practically painless. A drop or two of cocain solution may be injected beneath the epidermis, but this is unnecessary if a small sharp needle is employed. A little practice at intravenous injection soon makes an ideal aseptic technique a very simple procedure. Two things are indispensable, viz: an all-glass syringe and a vessel containing boiling water. I use Leur syringes and with an electric heater keep a kettle of water boiling in my office. Immerse syringe first in hot water; then, with plunger removed, all are placed in boiling water. I find a tenaculum a good thing with which to handle a hot syringe. Keep in boiling water ten minutes or longer. A small rubber band, the kind a boy uses in a slingshot, is placed a little on the stretch around the arm just above the elbow and clamped with hemostats. Select vein; paint skin with tincture iodine. Needle enters skin with syringe held at about half a right angle with extended arm. One can usually tell when needle penetrates wall of vein, especially if a sharp needle is used and after a little practice. When needle enters vein blood shows streaming through needle into syringe. Blood may be slow to appear in syringe if a very fine needle is used, either from obstruction in needle or low pressure in vein. With one hand hold syringe steady, with other release ligature, then inject slowly. Needle should

be pushed in slowly, so as not to penetrate the vessel, and remember if point of needle barely enters lumen a very slight movement, retraction or reduction in calibre after removal of ligature may cause point of needle to slip back through wall of vein.

Those who read Lydston's paper on syphilis in *Clinical Medicine* and contemplate injecting salvarsan with a Leur will do well to practice the operation first with cacodylate soda. The latter delivered slowly in blood stream causes no pain, but if you miss vein and if dose be large you will give your patient cause for complaint. In case of cacodylate, after a few minutes all will be well; not so with salvarsan. If on account of movement when hemostats are unlocked you are in doubt of needle being in vein, find out by gently pulling back plunger for a show of blood, and remember slow procedure may allow the needle to become obstructed by clot. I do not employ cacodylate soda as a substitute for salvarsan in syphilis, unless patient refuses to take salvarsan; then I give former preparation intravenously, and rapidly increase dose. At the same time I give our old trustworthy specific treatment. The maximum dose of cacodylate soda is an unsettled question. I gave a pellagrin thirty grains subcutaneously and observed no toxic effect. This patient was extremely weak and emaciated, but had taken the drug long enough to establish arsenic tolerance. This morning I gave fifteen grains intravenously to an arthritis case who is weak and emaciated, pulse 112 before receiving injection; pulse same after injection and no appreciable disturbance. Patient's only complaint was of nasty taste in mouth. I do not advocate fifteen grains for first dose, but I confess having given fifteen grains intravenously at first dose to several syphilitics and I have never had cause to regret it because I have never observed the slightest systemic disturbance. I keep ampules of 7, 10 and 15 grains. Is salvarsan the only arsenic preparation which may be given in large effective dosage is a question that comes up in my mind every time I pay \$3.50 for an ampule of Ehrlich's 606? I hope the day not distant when an American chemist will give us a salvarsan at a dollar a dose, and make a million at that. I have a great sympathy and pity in my heart for the poor syphilitic who cannot pay the price.

Cacodylate soda is as much inferior to salvarsan as our U. S. P. arsenic preparations

are inferior to the former in the treatment of syphilis. If one would learn the therapeutics of cacodylate of soda he should study the therapeutics of arsenic. All authors ascribe a very large field of usefulness in chronic diseases. In asthma, associated with chronic bronchitis, I have seen the dyspnea relieved as promptly by fifteen grains of cacodylate of soda intravenously as by relief obtained from the hypo of morphine. I have two patients of this type now under treatment who get relief before I get my syringe in my satchel. I cannot explain this action. Whether by neutralizing to some degree the acid body fluids or the effect of arsenic on the respiratory centers, I know not. I shall try an alkaline solution, perhaps salicylate soda, intravenously when a case of this kind is available.

In neuralgia, chronic rheumatism, rheumatic arthritis, cacodylate of soda should be the first thought; and also in anaemia, neurasthenia, and the various types cachexia. The value of arsenic in diseases of the skin is well established. In the administration of any preparation of arsenic, whether it be received per ore, subcutaneously or intravenously, one should watch the urine for albumen. The presence of this substance in the urine contraindicates the medicine.

We should remember the power this drug has to produce optic and retinal inflammation.

APPOINTMENT OF A CHIEF FOOD INSPECTOR FOR SAVANNAH.

As the result of a competitive examination held simultaneously in Savannah, Washington, Boston and Chicago, Dr. Dewitt C. Gilles, at present on the staff of the Bureau of Animal Industry, Washington, D. C., has been appointed to the position of chief food inspector to the Board of Sanitary Commissioners, City of Savannah.

The more money The Journal of the Medical Association of Georgia makes out of its advertisements the less it costs the State Association to run the paper. This means that every member of the State Association has an interest in the advertising columns. If one business firm advertises and another does not, patronize the one that does. It is money in your pocket.

SOME REMINDERS ON THE DIAGNOSIS OF PELLAGRA.

George M. Niles, M.D., Atlanta, Ga.

Just now, when many new cases of pellagra are manifesting themselves throughout this country, some in an atypic form, it may not be amiss to briefly describe the clinical symptoms of this protean disease.

When the erythema, the diarrhea or disturbed digestion, the depressed mentality, and the nerve pains all come together, the diagnosis is thrust on the physician **volens volens**. The very many atypic cases, however, that are constantly cropping up, together with the great importance to the patient of an early diagnosis, make it highly essential that as clear a diagnostic picture as can possibly be drawn should be available to the student of this oftentimes perplexing malady.

Viewing it in perspective, we might say that pellagra presents a **fourfold syndrome**, the presence of at least **two** units of which would be required to make a diagnosis. In some instances two are not quite sufficient for a positive diagnosis, though they furnish reasonable certainty, and a tentative diagnosis is justified. Three of the group would make out quite a strong case, while the presence of all four would preclude any doubt.

According to the views of the writer, who has carefully studied this subject, it is practicable to divide this fourfold diagnostic syndrome into the aspects of **gastro-intestinal, dermal, nervous, and psychic**.

It should be remembered that there is no definite rule as to the appearance of any one of these factors at any specific stage of the disease. Some have suffered from digestive ailments, irrespective of pellagra for years, so that the present gastro-intestinal symptoms may seem but an exacerbation of the original trouble.

In a considerable number of well-developed cases, if care is taken to bring it out, a history of slight, almost ephemeral "sunburn," occurring in previous springs or summers, and occasioning neither discomfort nor anxiety, may be elicited. In many pellagrins who perform manual labor, men who work in the open, who are exposed to the vicissitudes of the weather, or who handle heavy burdens; or women who perform laborious household duties, who scrub, wash dishes and

clothes, whose hands are much in hot water, and whose busy feet can scarcely keep pace with the constant demands—these pay but scant attention to slight erythemas.

Again, the dermal manifestations are occasionally late symptoms, preceded by one or more of the other factors, and only needed to "clinch" the diagnosis. However, to wait for these might cause the patient to lose precious time—time which might spell the difference between recovery and death.

The manifold symptoms of nerve irritation, appearing in such varied guises, may be readily mistaken for many pathologic conditions. The lightning pains of tabes dorsalis, the disquieting pangs of an incipient sciatica, the nervous rumblings of an ancient gumma—such as these may mask the picture and also cause the loss of valuable time.

In the psychic factor of the syndrome, the actual beginning of the deviation from the normal is often difficult to place; and to estimate temperamental changes or slight lapses of mental poise, which may be the starting points of grave psychic abnormalities, will sometimes tax the acumen of the conscientious student.

When a suspected case of pellagra presents itself, the following points should be noted in connection with a carefully taken history:

Has there been a history of indigestion at irregular intervals without apparent cause? Have certain articles recently disagreed that formerly agreed with the patient? Has the patient suffered with anorexia, colicky pains, diarrhoea, or tenesmus? Have there been vague or active neuralgic pains, or has there been burning of the hands, feet, tongue, or buccal membrane? These symptoms, if present, are exceedingly suspicious. Has there been a sense of malaise or weakness in the preceding spring, or any previous springs or seasons of the year? If this malaise has been present in the spring or summer, has it cleared up in the fall or winter? Has there been any "sunburn" of the hands or face or neck, or has there been any "chapped" hands or lips, which later on seemed well, but left for a while a tender pink surface? Has the tongue been sore, or have there been any "mouth ulcers" or sore tips or cheeks? Have there been any spells of "blues," or periods when everything went wrong? Another question, to which the patient cannot give a correct answer, is regarding any change of disposition or feeling towards those near and dear. Has there been insom-

nia, followed by an intense melancholy? Has fear of impending danger or a vague, undefined sense of ill-being brought about unhappy days and "nights devoid of ease"? Has the disposition seemed to be transformed so that a former cheerful temperament has lapsed into an unhappy and morose personality? These and others of like import are needed to bring out the salient features in the diagnosis of pellagra.

The following combined symptoms are strongly indicative of this disease:

A symmetric erythema of either the hands, forearms, sides of neck (rarely), sides of nose (rarely), sides of forehead (rarely), or the dorsal surfaces of both feet. (The writer, in the observation of nearly seven hundred cases, recalls no instance of pellagra presenting a one-sided skin lesion.) This erythema may be only a decided blush, not extending below the epidermis, but it must be symmetric, scaly, rather rough, and show a rather distinct line of demarcation at the junction with the healthy skin. Should the erythema be more pronounced, showing the surface of a dull pink, as if it had been "baked in a stove," should the dorsal surfaces of the hands appear "shiny," possibly merging into cracked and tender interphalangeal spaces, with dry, rough and scaly feel, and dingy brown or black palmar surfaces, this would constitute a formidable link in the chain of evidence. Erythematous patches on other parts of the body are not pathognomic, unless in conjunction with the others mentioned.

Should there be in addition to this erythema, a sore mouth or tongue, cherry-red and tender lips, inflamed buccal surfaces, tongue red and inflamed on the top or around the edges, and denuded of epithelium, aphthous ulcers on the tongue or buccal cavity, with dysphagia either from soreness or "nervousness," another link is added to the diagnostic chain.

Regarding the gastro-intestinal symptoms, should the patient complain of indigestion, to which are added colicky pains, and especially a diarrhea, apparently causeless, spasmodic, tending to involuntary evacuations, but little affected by what is eaten, and extremely foul in odor, another link has been added.

If, in addition, the patient should complain of shooting pains in the head or limbs, of parasthesias or formications, of anesthetic or hyperesthetic areas, of intense burning of

the mouth, tongue, hands or feet, or any other part of the body; if the locomotion is unsteady or impaired, or if tremors appear in the hands or tongue; if there is dizziness with the eyes closed, or fear of walking in the dark on account of pedal anesthesia, still another link is added.

If, in corroboration of the previous symptoms, there is more or less mental depression, verging into melancholy, or deeper forms of psychic change; if there are doubts, fears or obsessions, where there were formerly courage, fortitude, and a clear perception of men and affairs; finally, if mental failure marches apace with bodily cachexia, the picture may be considered complete, the links in the chain of pellagrous evidence uninterrupted, and the diagnosis may be made with assurance.

Where two factors in this syndrome are plainly manifested, it is sometimes perfectly safe to make a diagnosis of pellagra; for instance, if there is the characteristic erythema, coupled with indigestion and diarrhea. The nervous and mental symptoms may be absent, but the other proof may be sufficient. Again, there may be present a sore mouth and tongue, presenting a pellagrous appearance, and there may be a diarrhea and gastric distress. In such an instance, while the presumptive evidence is strong enough to warrant putting the patient under treatment for this malady, it would hardly be safe to make a positive diagnosis unless either the erythema or nervous or mental symptoms entered into the picture.

Whether or not a physician is justified in making a diagnosis of pellagra when there is at no time in the course of the illness any eruption, is an open question. The writer feels that it is possible for a case to run a certain course without any eruption, but would be exceedingly chary in diagnosing such a manifestation, unless the other three factors in the fourfold syndrome were present beyond a peradventure.

This presentation of the diagnostic syndrome, together with other considerations, as laid down, is thought by the writer to be full enough to enable any thoughtful observer to recognize a case of pellagra.

An advertisement in The Journal of the Medical Association of Georgia will bring results. Rates sent on request.

THE SANITARY DISPOSAL OF HUMAN WASTES.*

T. A. Mann, M.D., Brunswick, Ga.

One of the biggest problems of preventive medicine is the sanitary disposal of human wastes. The magnitude of the problem does not consist in a lack of knowledge of how it should be done, but in the difficulty of getting the people to establish the right methods. Medical men realize theoretically the importance of proper disposal, but practically a majority are not sufficiently interested to make them work actively for improved measures.

The object of this paper is first to impress upon every physician whom it reaches the important position and responsibility he holds in regard to bringing about improved conditions, and second, to present a feasible plan of disposal. The apathy and indifference of medical men tend to foster among the general public a feeling of safety and contentment with old and unsanitary methods of disposal. Medical men, regardless of their ability, enjoy a special respect given to their opinion regarding matters of sanitation and health. One word of criticism from a physician adverse or favorable carries much weight among his whole clientele. Adverse criticism by physicians of the measures attempted by health departments may woefully handicap the execution of those measures. For this reason medical men should be extremely cautious regarding the criticisms which they make. In this connection we are reminded of Longfellow's poem, which begins:

"I shot an arrow into the air.

It fell to earth I knew not where."

The first historical reference to the sanitary disposal of human waste is found in Deuteronomy, 23rd chapter, 12th and 13th verses: "Thou shalt have a place also without the camp, whither thou shalt go forth abroad; and thou shalt have a paddle upon thy weapon; and it shall be when thou wilt ease thyself abroad thou shalt dig therewith and shalt turn back and cover that which cometh from thee." If the children obeyed the laws that were given them they were in advance of many of the human race

today. How much better was their system than the open privy exposed to flies, chickens and animals of all kinds. Whether or not our ancient brethren had hookworm infection we do not know, but they could hardly have been affected more severely than many of our own people here in the South today. It is true we have our modern sewer systems. Engineering skill has taught us how to dispose of human waste in a sanitary manner, but only a small minority of the people avail themselves or can avail themselves of this method of disposal. The ancient paddle, in the light of modern knowledge, can hardly be recommended, but the open privy, and in many cases in the country no privy, can under no circumstances be justified.

Though some diseases can be transmitted from animals to man, most diseases in man are transmitted from man himself. It stands to reason that these diseases should be transmitted in the excretions. The problem then is to dispose of the excretions of man in such a manner that it will be impossible for the causative agents of disease which they might contain to find their way to another person. In this paper we shall speak of the human waste as meaning the excretions of the intestinal tract and kidneys.

While the relative importance of human waste disposal is as great in the country as in thickly settled communities, the problem is not altogether so difficult notwithstanding the fact that we have sewers. Sewerage disposal does not necessarily solve the problem, for the question of final disposal is to be reckoned with. Many cities today empty raw sewerage into streams to be a possible menace to some sister city below. Many others near the sea coast empty raw sewerage into their own harbors to be taken away by the tides. Both of these methods are bad and sooner or later evil consequences are apt to follow. One could hardly relish raw oysters from a sewer polluted stream even though no typhoid fever had ever been known to result therefrom in that community. The people should not be allowed to forget the danger fraught with improper final disposal, and should be taught that engineers can construct disposal plants which are safe and sanitary. These plants can be constructed small enough for one family or large enough for a whole city. The question of cost, however, precludes the possibility at the present time of the water carriage system for a majority of the people in the com-

*Read at meeting of Eleventh District Medical Society.
The Sanitary Privy: Farmers' Bulletin No. 463, 1911.
Department of Agriculture.

try districts of the South, and until the people are convinced of its economy, for a great many in cities and towns. We must look, then, for some cheaper plan of waste disposal.

Removal in the Country.

For two or three hundred dollars a water closet with a septic tank can be built. The effluent can be disposed of by subsoil drainage. In the ordinary country home of the lower classes of whites and negroes, however, this plan is not available. Among these people also it can safely be said that closets will not be cleaned weekly or even monthly by removing and cleaning a can. Even if a can is used there comes the question of final disposal, generally by burial. If buried in the field or garden there will be danger of hookworm infection, or, if under certain vegetables, typhoid fever. A well known example of the evils of improper waste disposal was found by Dr. Abercrombie and the writer during April, 1913, in the Dodge Home for Orphan Boys at Frederica, Ga. It was their custom to mix the closet waste with the stable manure. After composting this mixture was spread on a twenty-acre plot filled by the boys. Nineteen or twenty boys were found infected with hookworm. Some were suffering with severe infections and one was almost dead. The one not infected had recently arrived. The importance of making a change in the manner of disposal was stressed, but the writer was informed recently that no change had been made.

In the country a good plan would be to dig a hole in the ground about four feet deep, two feet wide and three feet long. A board framework should be placed around this to prevent caving. The closet should be light and easily movable. There should be no opening behind and when placed over the excavation the space beneath the seat should be perfectly fly tight. Two ventilators, one a small opening three or four inches square securely screened by sixteen mesh wire, should open on one end of the space beneath the seat. On the other end a similar ventilator could be made, or preferably there should be a three-inch pipe or a boxing five or six inches square made to run from the seat up through the roof. The hole in the seat should be covered by a board made to fall by gravity. This style of closet will go many months before it needs cleaning, and when care is taken to locate it where there is

no danger of contaminating the water supply, no trouble will arise, as the closet will be fly proof and protected from animals. When the excavation is almost full the closet can be moved forward and a new hole dug. This type of closet will be especially satisfactory in a sandy soil. In a rocky or limestone soil, however, great care should be taken to locate the privy far away from the source of the water supply. Sometimes in this kind of soil crevices under the ground may run a long distance and fluids may, without filtration, find their way to the drinking water. This type of disposal cannot be recommended for crowded communities and should not be permitted, for surface wells are almost certain to be affected. In a series of wells examined by the writer during 1910 in Durham, N. C., where the normal chlorine contents of the surface water is about five or six parts per million, the average was about twenty parts per million. These surface wells, open closets, and we might add typhoid fever, are common. The increased chlorine in these wells was no doubt influenced by the urine seeping through the ground. In all of the wells colon-bacilli were found in large numbers. It could not be shown, however, that the wells were not contaminated from the outside as they were of the open bucket and chain variety.

Disposal in Villages.

In crowded communities where sewerage disposal is not available the problem is difficult because it is necessary to remove the contents frequently or to have concrete cess-pools. While it would be easy to clean the closets by the double can system, which we shall describe presently, the question of final disposal is to be considered. Probably the best plan would be for the community to have a plot of ground on the outskirts of town to be used for no other purpose than disposal. Trenches could be dug and the contents of the cans emptied therein and covered immediately. A special washing station could be fitted at this place for cleaning the cans. It is easy to dismiss this problem by saying that some dry earth system could be used, but the writer does not know of any sanitary dry earth method where all of the waste can satisfactorily be disposed of at frequent intervals. The sanitary privy advocated by Stiles and Lumsden* could be used, but it is probable that sufficient water

would not always be poured in when the closet is used. It is also likely that the overflow would be neglected.

Disposal in Unsewered Districts of Cities and Towns.

In the opinion of the writer the most desirable substitute for the water carriage method of waste disposal is the two-can sanitary system as used in Brunswick, Ga., and Asheville, N. C. It consists simply of a special galvanized can 15 x 14½ inches, placed in a fly tight but ventilated night soil box. Both the liquid and solid waste are collected and at the end of ten to fourteen days the cans are taken to a disposal station which opens into the main sewer. This plan of disposal is suitable for warm and temperate climates and in districts where a sewer is available for final disposition. Considered from a public health standpoint it gives practically 100 per cent efficiency. From a standpoint of convenience it has no advantage over any other dry system except perhaps that it can be placed nearer the house without objection.

Four points of importance should be considered in this system: First, the closet; second, the can; third, the wagon, and fourth, the disposal station.

The Closet. Any type of closet will do, provided the night soil box for holding the can is made fly tight and is ventilated. There should be two ventilators with can placed between them. An opening five or six inches square, securely screened by sixteen mesh wire and placed in one end of the night soil box, will serve as one. At the other end should be a three-inch pipe or a wooden boxing about six inches square to extend from seat through the roof. These ventilators give free exit to the gases and prevent objectionable odors found in unventilated closets. The top of the night soil box should be hinged to allow the easy removal of the can. It is better to have the cans removed from the inside since outside flaps or doors tend to warp and in the course of time make cracks for the entrance of flies. The cover for the opening in the seat should be hinged so that it will fall by the force of gravity.

The Can. The can should be made of substantial galvanized iron. Twenty-two gauge iron, galvanized after the can is made up, is preferable. The size of the can should be fifteen inches in diameter and fourteen and a half or fifteen inches high. A can of this

size is large enough for a family of four or five for two weeks. When the closet is cleaned the cleaner covers the full can, puts in a clean one and goes to the next closet. The can used in Brunswick is similar to the one used in Asheville, N. C., and is fourteen and a half inches high and fifteen inches in diameter. Iron bands one inch wide run at right angles down the side and underneath the can. The covers of the cans should be tight fitting with flanges on the inside. The flanges should be very wide, at least two and a half to three inches. The details in regard to the size and weight of the can and the flanges to the cover are very important and mean much in the practical success of this system.

The Wagon. For transporting the cans through the streets a light spring wagon should be used. A perfectly flat bed with raised edges about one inch high on all sides is preferable, or in lieu of this a flat bed with removable uprights about sixteen inches apart.

The Disposal Station. The disposal station should be a room twelve or fourteen feet square with a smooth concrete floor. In one corner or on one side should be a large hole about three feet in diameter at the top and four feet deep, tapering to a twelve-inch sewer. A hydrant with a mouth directly over the opening is necessary. To this also should be attached one-inch hose for washing the cans.

With a good sewer system in a community and this plan of disposal in the unsewered districts, the diseases transmitted through the excreta can, within a year or two, be reduced to a minimum. Asheville, N. C., reduced her typhoid death rate from 60 per 100,000 in 1910 to zero in 1912 by adopting this plan. No open privy should ever be allowed, it matters not where the locality. Just as the health of the individual cells affects the health of the human body, so does the health of the individual citizen affect the health of the community. This is an age of community interests. We are so closely identified in one way or another that it is very unwise, sometimes disastrous, to neglect the questions which pertain to the individual and the public health. The word liberty we hold very dear, but we should not mistake license for liberty and allow the individual to do things which will be a menace to his neighbors.

It is impossible to estimate the harmful

effect upon mankind of the improper disposal of the excreta. It is said that seventy to seventy-six per cent of the farming population of China is infected with hookworm. Sixty to eighty per cent of India's three hundred million have it. In Malay, Ceylon, Samoa, Philippine Islands and Japan the infection is considerable. In Porto Rico a few years ago ninety per cent of the natives suffered with it. All of this is due directly to an improper disposal of the human wastes. Most of the typhoid fever, especially rural typhoid, is due to this same cause. Thousands upon thousands of cases of this disease are tabulated every year, and we go on from day to day piling up statistics to prove that typhoid fever is due primarily to improper human waste disposal. What good will all these statistics do if we do not make better use of them to bring about improved conditions? The trouble with us all is that we are content to make progress too slowly in matters of disease prevention. We are content to work along popular lines, to please the politicians or the masses, rather than fight for the things we know will be of the greatest benefit and bring the best results in promoting happiness and saving human lives. "Because right is right, to follow right, Were wisdom in the scorn of consequence."

DR. SIDNEY WALKER MADE SURGEON OF W. & T. ROAD.

Dr. Sidney Walker of this city has received the appointment of surgeon for the Wrightsville and Tennille Railroad of this city to succeed the late Dr. E. New, who held that office at the time of his death.

The office of railroad surgeon is an important one in many ways, and Dr. Walker is eminently fitted as a physician both by education and experience to fill the position, and he will make the road a most acceptable man for this place. His many friends here are gratified at his appointment and are extending him congratulations.—Dublin (Ga.) Dispatch.

TO PRACTICE MEDICINE HERE.

Dr. Alton Davis, who graduated this summer from the Atlanta Medical College, is now in Warrenton and expects to permanently locate here for the practice of his profession. At present he is associated with Dr. W. W. Pilcher.—Warrenton (Ga.) Clipper.

AN ACQUIRED CASE OF MORBUS CAERULEUS IN AN ADULT.*

J. E. Sommerfield, M.D., Atlanta, Ga.

This disease, which is most common in early life is characterized by a bluish color of the skin and the mucous membranes, with dyspnoea, attacks of suffocation, torpor, inertia, and tendency to chilliness. The symptoms result from cardiac and vascular lesions, which bring about a mixture of arterial and venous blood and do not allow the blood to be sufficiently oxygenated.

Pathology, According to Dieulafoy.

The mixture of arterial and venous blood results from abnormal communication between the arterial and venous systems, and the abnormalities which make this communication possible affect the heart and great vessels. The abnormalities of the heart are represented by the persistence of Botallo's foramen (52 out of 69 cases, Guirac), by communication between the two ventricles (32 cases, Guillon), and the fusion of the cardiac cavities, so that the heart may show one, two or three cavities. The vascular abnormalities comprise abnormal origin of the vessels and the persistence of the Ductus Arteriosus (30 cases, Almagro). Most of the malformations are congenital, and apparently due to arrested development of the heart, to endocarditis, and especially due to stenosis of the pulmonary artery, arising during intra-uterine life.

M. Aberle of Vienna gives the following conclusions as the result of an analysis of 180 cases of Morbus Caeruleus:

"In 100 cases there was a defect in the partition of the ventricles; in 87 of these cases there was also an abnormal communication of the ventricle with the aorta; in 22 the foramen ovale was closed, and in 65 it was open. In four cases only the pulmonary artery arose from both ventricles, and the pulmonary artery was thirty-seven times restricted or even quite closed. Of the 180 cases, two-thirds were males."

It has been supposed by Louis, Frank and others that the contraction of the pulmonary artery which is so commonly met in those who have perished after laboring under symptoms of cyanosis, is the chief cause of

*Read at meeting of Medical Association of Georgia, Atlanta, Ga., 1914.

the nonclosure of the foramen ovale, in consequence of the over distention which it keeps up in the right cavities of the heart.

Haymond says of the mechanism:

"When pulmonary stenosis is present, the consecutive changes in the heart are perfectly intelligible. The right ventricle hypertrophies, because the obstruction demands increased work, but the dilation is slight or absent, because the imperfect septum allows blood to flow back into the left cavities. The formation of the septum becomes arrested as the result of the reflux in question. If the lesion has arisen before the development of the ventricular septum, this is to say, before the end of the second month, the two ventricles continue to communicate with one another, and the communication is the larger as the pulmonary artery remains closed at a time more closely approaching that of conception. If, on the other hand, the ventricles are already shut off from one another when obliteration of the pulmonary artery takes place, the flow of blood from the right auricle into the corresponding ventricle is prevented, a powerful current is established from the right to the left side of the auricular chamber, and Botallo's foramen remains open. As the aorta, however, is from this time the only channel open to the blood stream, the blood can only reach the lungs through the Ductus Arteriosus, which, therefore, persists after birth as a permanent tube.

The lesions, however, although they allow, more or less, the mingling of arterial and venous blood, do not always cause symptoms of *Morbus Caeruleus*. Indeed, there are many examples (Gelan, Longhurst) showing that excellent health and absence of cyanosis have for many years been compatible with the mixing of arterial and venous blood. Another factor is therefore required to produce *Morbus Caeruleus* and the lesions most favorable to this result are those which do not allow the mixed blood to be properly oxygenated in the lung.

Bard and Curtlett describe as Cyanosis Tardiva a cyanosis occurring as a terminal event, often at the end of a long life, in case of patent foramen ovale, where some embarrassment in the pulmonary circulation caused a raised blood pressure in the right heart leading to a flow of blood through the foramen, and sometimes to its forced reopening when it has been closed. They quote the case of a man, aged 54 years, with patent

foramen, dying of broncho-pneumonia, in whom the late cyanosis had, in their opinion, been produced by the rise of pressure in the right heart. Before this, Peacock reported a case in a woman 24 years of age, with marked spinal curvature and widely patent foramen ovale, in whom marked cyanosis set in for the first time in the last month of life.

Cyanosis may be present without the admixture of currents would seem to be shown (1) by its presence in a limited number of cases of congenital pulmonary stenosis, in which the foetal passages are all closed, and (2) by the fact that the most marked pictures of cyanosis with clubbing may occur in acquired pulmonary Emphysema and in bronchiectasis. But in these latter combinations lies perhaps the key to the situation. Here, venous stasis, admixture of currents and local alterations in the capillaries seem to meet. In Emphysema, as Thomas points out, large areas of lung tissues have been absorbed, and it is easy to imagine that a certain amount of blood may pass from the pulmonary artery direct to the pulmonary veins, without undergoing due oxygenation in the capillaries by the way.

Description.

The bluish coloration is most marked in the lips, the nostrils, the lobes of the ear, the ends of the fingers and toes, and the mucous membranes of the tongue and pharynx. The cyanosis is not always of the same intensity, and diminishes during sleep or after a long rest, while slight effort causes its return and marked increase. The fingers in addition to the violet tint show marked deformity, the last phalanx being swollen and rounded, while the nails are thick, broad and curved. Respiration is short and painful, the voice is shrill and jerky, and the patient cannot exercise without feeling short of breath and suffering palpitation, angina and syncope. He is conscious of the lowering of his temperature (95 degrees Tupper) and the slowness of his movements somewhat resembles those of cold blooded animals. The cyanosis, dyspnoea, somnolence, apathy and coldness are explained by the fact that the blood contains too much carbonic acid and not sufficient oxygen. The duration of life depends upon the nature and gravity of the lesion. Some patients die from asphyxia or syncope, while others become tubercular.

Examination of the heart gives uncertain information as to the precise seat of the lesion. The area of dullness varies with the hypertrophy of the ventricle, and palpation somewhat reveals a continuous thrill with reinforcement. The murmurs heard on auscultation vary. Perhaps the systolic murmur, with its maximum at the fourth dorsal vertebra, indicates the persistence of a ductus arteriosus.

Report of Case.

S. S., age 54, male, Russian, 5 feet 7 inches tall, weight 170 pounds, shoemaker by occupation, gives a negative personal history except as follows: About ten years ago he had what was then supposed to be abscess of the liver and gall stones. No operation was performed but patient gradually regained his health. A scar on the right shoulder shows where he had a carbuncle a few years later. About four years ago patient had a severe attack of grippe, being confined to the bed about five weeks. Since that time he had been a sufferer of asthma and had severe attacks of dyspnoea and coughing. Thinking that his condition was due to the climate, he left Jacksonville, Fla., two years ago and moved to Macon, Ga., but the change did not benefit him. About four months before his death the asthma and dyspnoea and coughing became much worse and he was compelled to give up his work. About the same time the cyanosis began to show itself.

He was first seen by me on December 8, 1913, about 9 p. m. I found him sitting up in bed, coughing and gasping for breath, occasionally coughing up a viscid fluid tinged with blood. He was quite cyanosed, almost black in color. Was unable to examine him and gave him a hypodermic injection of morphine and atropine, which somewhat relieved the condition. On the following morning I examined him and found a marked Emphysema present, the chest was barrel-shaped, the heart much hypertrophied, the dullness extending from the right border of the sternum to the left nipple. The abdomen was much distended and tympanitic; the liver could be felt three fingers below the lower border of the ribs. Owing to the dyspnoea but little could be made out on auscultation: the heart sounds were muffled and seemed to be far away; no murmur heard. His temperature was 95 degrees F., pulse 106, respiration 26. Blood pressure with Tyco's 130 mm. He was drowsy and complained

constantly of being chilly, would move about in a slow, deliberate manner. His skin was bluish black in color, his finger tips swollen and his nails curved. Examination of urine sp. gr. 7080, acid, albumen present and a few hyaline casts. Under morphine, strychnia, and nitroglycerine he appeared to improve a little, but in a few days the condition became worse again. While under the influence of morphine, the cyanosis became less marked, but as soon as he moved or coughed, it returned and became markedly increased. On December 17th, Dr. Stewart Roberts saw him in consultation and on his suggestion fourteen ounces of black blood were taken from his veins. His breathing improved for a few hours only, and in the course of twelve hours he died during a fit of coughing. No post-mortem was permitted.

An examination of the blood gave a positive Wassermann test. Perhaps the so-called liver abscess of ten years ago was a specific disease. The cyanosis in this patient appeared at the same time that the emphysema and asthma became worse, and evidently we have before us a case of Morbus Caeruleus not congenital in character but due to emphysema and resulting from the non-oxygenation of his blood in his lungs.

DR. THOMAS E. PUGH LOCATES IN EATONTON.

Dr. T. E. Pugh, a recent graduate of the Atlanta Medical College and a classmate of Dr. Richmond Reid Holt, has located in Eatonton for the practice of his profession. Dr. Pugh, a former resident of Milledgeville, comes very highly recommended as a young man of excellent character and many good qualities to recommend him in the pursuit of his profession as a physician, aside from his good record at college and his thorough preparation for his work.

Eatonton is always glad to welcome young men to her midst and a very cordial welcome with hearty good wishes has already been extended Dr. Pugh.—Eatonton (Ga.) Messenger.

SANITARIUM.

Two-story, 14-room building, twenty acres land; high altitude, fine location for Sanitarium. Will rent or sell.

DR. J. A. S. CHAMBERS.

Inman, Ga.

MY EXPERIENCE WITH ANOCLASSOCIATION ANESTHESIA.*

E. C. Davis, M.D., Atlanta, Ga.

Since hearing the excellent paper of Dr. Crile on anocel association and witnessing his enthusiastic demonstration of its use at his clinic in Cleveland, I was persuaded to give this method a careful trial during the past eighteen months, and while my experience has been limited to 289 cases, it has proven its value in properly selected cases.

My experience has not caused me to indulge in the great enthusiasm that characterized Dr. Crile's work, but that the method has its useful sphere there can be no longer any doubt. Any diminution of shock during or following operations should prove a welcome adjunct to the surgery of today. If Dr. Crile's theory of shock be a correct one? his method will prove of inestimable value.

Aside from the direct influence upon the so-called subconscious nerve which the local anesthetic influences, his efforts should relieve post-operative pain, commands our most careful consideration. We have found the local use of novocain solution which he recommends very advantageous, but the quinine and urea solution often acts as an irritant, causing a tendency to infection or the discharge of a serous secretion which is quite annoying to the patient. It is unfortunate that this be the case, for this prolongs the anesthetic effect and would be a source of much relief to the patient, were it not for its disadvantages, which make it of questionable value. The blocking or anesthetization of the nerve supply locally will undoubtedly check the transmission of shock impulses to the cerebral centers in many instances and the patient put to bed with pulse rate not accelerated and the respiration normal, even though the operation has been prolonged and difficult. Of course, this does not apply where there is much loss of blood nor where there has been undue traction made on the mesentery, intestines or even the abdominal muscles. The abdominal relaxation which follows the proper use of this method makes undue traction unnecessary. Again, the lack of protection to the viscera must not be forgotten as causation of shock, and the method blamed when these failures to avoid shock are not carefully carried out.

The value of the plan is undoubted in proper selected cases, both for the reduction of shock and the relaxation of the abdominal muscles. In addition to these effects, in a few instances, the diminution and post-operative pain and discomfort make this method well worthy of serious consideration.

To those who have undergone the discomforts of post-operative pain, any effort to relieve this will prove a most welcome and valuable adjunct to our surgical armamentarium. My experience covers 289 cases and my conclusion following the use of this method constrains me to believe that it is only the beginning in a line of work which will prove of inestimable value in the future.

Among the 289 who were operated on there were five deaths. These operations include all types of abdominal operations as well as goitres, in fact all type of surgery where the method was applicable.

DISCUSSION ON DR. DAVIS' PAPER.

Dr. C. C. Harrold, Macon: I would like to ask Dr. Davis the strength of the quinine urea which he used in which he got the infection?

Dr. J. R. B. Branch, Macon: There is apparently no question that the method of Dr. Crile is a remarkably good one. His theory is not only ingenious, but one that he has apparently proved to the satisfaction of the profession generally. Whether his theory is true or not, makes no difference, for his results speak for themselves. There is a remarkable reduction not only in mortality, but in the post-operative discomfort which Dr. Crile has secured through his method. This of itself would make it of inestimable value. One particular thing about his combination of anesthesia which appeals to me is this, or one drawback to general anesthesia is this: We get the patient so sound asleep and so thoroughly relaxed, that we are inclined to be unnecessarily rough in our surgical work, and we can do what we please so far as using retractors is concerned and pulling on the mesentery, and general anesthesia has allowed us to do that. One cannot do that with the anesthesia that Dr. Crile has devised, and that is a very valuable point in my mind. As surgeons we ought to be more gentle. Just because a patient is asleep and cannot cry out with pain, there is no reason why we should insult the nerve centers, and

*Read at meeting of Medical Association of Georgia, Atlanta, Ga., 1914.

by the use of the method Dr. Crile has devised we are compelled to be gentle, and if we are a little rough, maybe necessarily so, these stimuli that are insulted do not reach the central nervous system. It is an extremely valuable addition to surgery and one that appeals to all of us, particularly in dealing with handicapped patients. The ordinary patient will stand almost anything; but we do have patients on the borderline and the introduction of this method has enabled Crile and others to save many lives that would have been jeopardized; at least, the cases would have been really inoperable, and we would add greatly to our mortality. It is a splendid addition, and one that certainly deserves trial.

One objection to it is this: It requires a skillful anesthetist. A combination of gas-oxygen anesthesia is very safe one in expert hands, but hard to give, and requires a great deal of practice, and that objection will exist until we are able to secure an expert anesthetist. In the practice of the average man ether is the anesthetic of choice. Of course, a poorly given nitrous oxide and oxygen anesthesia is worse than a fairly well given ether, but if we can get the services of one who is expert in giving nitrous oxide and oxygen and use the combination method, we have an absolutely ideal anesthetic.

Dr. Davis, in Closing: The strength of the quinine urea recommended by Crile is half of one per cent. That is the strength used, and even that acts as an irritant, although sterilized for three times as indicated in his method of procedure.

AMERICAN COLLEGE OF SURGEONS.

The second Convocation of the American College of Surgeons was held in the ballroom of the Bellevue-Stratford, Philadelphia, on the evening of June 22, 1914. Here Prospective Fellows were invited to sign the membership roll during the day.

Program.

- 8:00 Fellows and guests assembled.
- 8:10 Governors assembled.
- 8:20 Candidates for Fellowship assembled.
- 8:25 Regents assembled with honorary guests.

Invocation by Bishop Philip M. Rheinlander.

Introductory remarks by the president.

Presentation of the roll of candidates for fellowship by the secretary.

Conferring of fellowship by the president.

Introduction of honorary fellows individually by the regents and conferring of fellowships by the president.

Fellowship address by Dr. James G. Mumford.

Concluding remarks by President J. M. T. Finney.

Adjournment, followed by an informal reception.

Conferring of Fellowships.

Dr. Edmond Souchon of New Orleans was introduced by Regent Rudolph Matas. Before conferring the degree, Dr. J. M. T. Finney received the candidate and said:

"Edmond Souchon, American of French descent, himself of the best French training. Eminent as a teacher, anatomist, surgeon, sanitarian, and original contributor to the literature and technical advancement of his profession. Ingenious in devising graphic methods of illustration in the teaching of anatomy. Founder and organizer of an unrivaled museum of anatomical, surgical, and pathological dissections, all prepared in a masterly fashion with extraordinary effectiveness by methods of his own invention. Conspicuous in surgery—among other enduring contributions by his monumental history of the subclavian artery and its lesions—he exemplifies the highest ideals of the great Southern school in connection with which his life's work has been done."

Dr. Francis J. Shepherd of Montreal was introduced by Regent Frederic J. Cotton. Before conferring the degree the president received the candidate and said:

"Francis John Shepherd, author and teacher for over forty years, a conspicuous figure in the world of surgery. Educated in the best professional schools of his own country and abroad. Representative of the highest culture and best traditions of the Canadian school. Recipient of the highest honors here and at home, Honorary Fellow of the Royal College of Surgeons of England."

An honorary degree was conferred in absentia upon Dr. Thomas Addis Emmet, whose name was presented by Regent W. D. Haggard. The President said:

"Thomas Addis Emmet, a Virginia born

and reared, whose distinguished work has been done in the North. A survivor of the antebellum surgery, he himself has entered fully and successfully into the modern era. One of the first and best known of American gynecologists, as an operator, writer, teacher and practitioner, he was a leader far beyond his own generation of the surgical giants of our America in the nineteenth century."

Fellowship Address.

Dr. James G. Mumford of Clifton Springs was introduced by President J. M. T. Finney, and delivered the fellowship address.

Concluding remarks by President Finney. Adjournment was followed by an informal reception.

Applications for Fellowship.

Nearly four thousand applications for fellowship in the College had been filed up to June 1, 1914. Of this number the Committee on Credentials recommended to the Board of Regents 1,059 for fellowship at the first convocation, and 1,055 at the second convocation. A large number of the applications still on file will undoubtedly be found to represent successful candidates, when they have been considered by the Committee.

Future Convocations.

The third Convocation and the annual meeting will convene in November, 1914, the date and place to be announced later.

Fellows in Georgia.

F. Phinizy Calhoun.....	Atlanta
William E. Campbell.....	Atlanta
William Henry Doughty.....	Augusta
William Simpson Elkin.....	Atlanta
William S. Goldsmith.....	Atlanta
Ralph Montgomery Goss.....	Athens
Edward Groves Jones.....	Atlanta
Rufus R. Kime.....	Atlanta
William Clifton Lyle.....	Augusta
H. H. Martin.....	Savannah
Floyd Willcox McRae.....	Atlanta
William Perrin Nicolson.....	Atlanta
George Henry Noble.....	Atlanta
Dunbar Roy.....	Atlanta
Thomas Pinekney Waring.....	Savannah
Willis Foreman Westmoreland.....	Atlanta
George R. White.....	Savannah

A MUCH NEEDED LAW IN GEORGIA.

Noting from the reports of the American Medical Association which held its sixty-fifth annual convention in Atlantic City, N. J., during the past week, they are to put forth stronger efforts than ever before in fighting the fake doctor proposition. This is one matter that the State of Georgia has been very neglectful about and each year thousands of dollars are grafted from ignorant people by these fake doctors who are continually traveling over the country selling their worthless products. Richland has been infested with them off and on since it has been a town and we have yet to see the first one (regardless of what he is selling) fail to make a very good sale of his wares which net him at least ninety-nine per cent.

These quacks can, through some means or other, secure a tapeworm and a few worthless recommendations and erect a two by four stand on any street in the State of Georgia today, and cry out their spiels, and within ten minutes collect more people than Spurgeon, Moody or Wesley could have collected in two hours. They disregard the truth, they are gifted liars, and their one purpose is to secure the services of some old innocent Confederate soldier to protect them from city license, and their stock is complete and they are fully prepared to deadbeat hundreds of thousands of innocent people out of their hard earned money.

The State of Georgia needs a law which will revoke the license of any Confederate soldier who sells his rights to fakers, and it needs a law to prohibit the sale of medicines that are worthless and very often poisonous. The State Board of Health or some other medical body could be authorized to make a test of the ingredients of all patent medicines which are to be sold in Georgia, and only grant the privileges for the sale of those which are of some value and benefit to the people. The general run of people are ignorant of the stuff being sold by these quacks and are so innocent as to believe the prepared spiel handed out to them, and ignorantly they purchase the filthy and worthless dope to give to sick and puny children who must suffer the consequences. We do not know the remedy, but Georgia should make some plans to stand by the American Medical Association in abolishing the quack doctors and fake medicines.—Richland (Ga.) News.

THE JOURNAL

OF THE

Medical Association of Georgia

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CONTRIBUTIONS TYPEWRITTEN: Authors should have their contributions typewritten—double-space and with ample margin—before submitting them. The expense is small to the author—the satisfaction is great to the editor and printer. We cannot promise to return unused manuscript, but try to do so in every instance. Manuscript should not be rolled or folded.

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ANONYMOUS CONTRIBUTIONS, whether for publication, for information, or in the way of criticism, are assigned to the wastebasket unread.

NEWS: Our readers are requested to send us items of news of a medical nature, also marked copies of local newspapers containing matters of interest to physicians. We shall be glad to know the name of the sender in every instance.

THE GENERAL PRACTITIONER AND THE PUBLIC.

The recent crisis in the affairs of the profession has had many interesting by-products. One has been the emergence of the general practitioner and his doings into the light of publicity. It has been almost an article of faith with the practitioner that his work concerned only his patients and himself, and that the relationship between them was of an intimately private nature. He was, in fact, engaged in "private practice." The more seriously the practitioner regarded his work the more scrupulously did he shun anything like publicity as being of the nature

of an intrusion inimical to the true interests of his patients and his profession. He felt that his proper sphere was the bedside of his patient or his own consulting room. But of late the veil has been rudely pulled aside, and the fierce light of publicity has been flashed on his doings. His comings and goings, his moral character, his private income, his hours of labor and the value of his labor have become themes for political platform eloquence and of public conversation. He finds the records of his daily visits and prescriptions, and of the miles he drives or motors or walks added up by statistical officials. He finds his diagnosis of his patients' ailments subjected to the interested scrutiny of professional and non-professional critics. Some temporary feeling of bewilderment may have resulted from these changes, and the problem before the practitioner is how to accommodate himself to the new environment. During the last few years it has been interesting to watch how that environment has been changed by such non-essential factors as the introduction of the telephone and the motor car. * * * If this greater publicity and these altered conditions were to lead to a loosening of the personal tie between the patient and his doctor or to any slackening of the daily routine of dealing with individual cases of suffering and disease the change would be wholly evil. It is by this test of personal contact that all these changes must be judged. The relation is one which can be affected by any insurance act or the interposition of any government or public body in its non-essentials. Fuller recognition of the work will lead to an added interest in the work itself, and, viewed with a larger outlook, the work will gain in importance from its correlation with other factors. Another result has been that a clear image has been obtained of the position which, by the slow evolution of the last generation, the general practitioner has come to occupy. Thirty years ago surgeons, medical officers of health, specialists in all branches and not a few physicians had individually emerged from the ranks of general practice, and therefore had an intimate knowledge of the every-day experience of the general practitioner; the proportion of consultants and specialists of today who have had this experience is probably very much smaller. These altered conditions have hardly been noticed by the general public, and their full bearing has not yet been appreciated com-

pletely even by the profession. The physician or surgeon or specialist cannot now speak with the same authority as formerly on the problems which the general practitioner has to face. General practice has, in a certain sense, become a specialty. It is true that its ranks contain a larger number than any other branch of the profession, but the large increase of the number of whole-time appointments and of specialists of every conceivable variety in the last few years and months raises a doubt as to how long this numerical preponderance will obtain. But we are at least assured that there is no danger of the extinction of the general practitioner. The intimate personal relation between the individual patient and his doctor is an essential factor which no changed conditions can completely eliminate. It is on the general practitioner that the eyes of the public and the profession are now turned, and we are confident that the trust will be completely justified.—Editorial, British Medical Journal, May 9, 1914.

PUBLIC HEALTH BILL IS PASSED.

House Approves Measure Creating State Board of Fifteen Members.

The public health bill is probably the most important piece of legislation that has passed the house during the 1914 session. The essential provisions of the bill are as follows:

It provides for a state board of health of fifteen members, three of whom—the secretary of state health board, the state veterinarian and the superintendent of schools—shall be members by virtue of their office; and the other twelve to be appointed by the governor one from each congressional district in the state and a majority of them to be physicians.

County Health Boards.

It provides for a county board of health in each county where two successive grand juries have recommended the same, or in two or more counties where the combined population does not exceed 75,000; and for sanitary districts to consist of one for each county, or group of counties which combine as provided.

It provides for a commissioner of health in each sanitary district, who shall be elected by the county health board from a

list of eligibles furnished by the state secretary of health; and clothes this commissioner with full power and authority to enforce the health regulations prescribed by the county health board, to inspect private premises, to inspect all places where food and drinks are sold, to inspect public schools and their premises and to examine school children, teachers, janitors, etc.; to deliver lectures to schools on health subjects, to establish quarantine districts, and to take all other steps which may be necessary for the protection of the public health.

DR. REDDINGS IS VICTIM OF AN ATTACK OF PNEUMONIA.

After a brief attack of pneumonia Dr. J. H. Redding, one of the best known residents of Waycross, died at midnight last night at his home on Alice street. For over fifteen months Dr. Redding had been in bad health. While it was known his condition was critical his death came as a great shock to his family and friends.

The deceased was 65 years old and previous to moving to Waycross twenty-six years ago he made his home in Macon. He was a graduate of Emory College at Oxford and of three medical colleges. He also took post-graduate courses in New York city. Dr. Redding was held in high esteem by all who knew him and his death has cast a gloom over his wide circle of friends. He was a member of the Masons.

Besides his wife Dr. Redding is survived by two sons, Henry S. Redding and Charles L. Redding, both of Waycross; two sisters, Mrs. M. R. Ross of Macon and Mrs. R. J. Redding of Griffin, and one brother, C. H. Redding, of Waycross, also survive.

The funeral services were conducted at the late home of the deceased by Dr. J. H. Scruggs, pastor of the First Methodist Church, of which Dr. Redding was a member. The remains were taken to Savannah for interment.

PERSONAL.

Dr. A. W. Stirling announces that on August 1 he will take into partnership Dr. J. Calhoun McDougall, house surgeon, New York Eye and Ear Infirmary.

Dr. W. S. Goldsmith, Atlanta, announces the removal of his offices to suite 404, Healy Building.

DEATH OF DR. C. L. WILLIAMS

With profound sorrow the Journal of the Association chronicles the death of its Vice-President, Dr. C. L. Williams, of Columbus.

Dr. Williams was born in 1844 and graduated from Bellevue Hospital Medical College in the class of 1867.

For years he had been an active member of the Medical Association of Georgia, and previous to his election as vice-president had served for two terms as councillor for his district. His wise counsel and advice was always appreciated by his brother officers, and no one will ever be missed more than he, in Association affairs.

Every member of the Association joins the Journal in tendering heartfelt sympathy to the bereaved family.

TRIBUTE TO THE MEMORY OF DR. C. L. WILLIAMS.

Resolutions by the Chattahoochee Valley Medical and Surgical Association.

The undersigned Committee of the Board of Council of the Chattahoochee Valley Medical and Surgical Association, in special session, do hereby adopt the following resolutions:

Whereas, Death has removed from our ranks our greatly esteemed and much beloved member, Dr. Charles L. Williams; be it

Resolved, That in his death this Association has sustained an irreparable loss because he was a man whom all esteemed and respected—one who was always faithful and loyal to the best interests of our Association. His pure and upright life has been an inspiration

to all of us and to all with whom he came in contact. Be it further

Resolved, That we tender our sincere and heartfelt sympathy to the bereaved family, and that a copy of these resolutions be sent to them; that a copy be enrolled upon the minutes of our Association, and that a copy be sent to the Journal-Record of Medicine, our official organ, for publication.

J. H. McDUFFIE,
President.
W. J. LOVE,
O. V. LANGLEY,
Committee.

Resolutions Adopted by the Muscogee County Medical Society.

It is the sad duty of the Muscogee County Medical Society to memorialize one of its most faithful and beloved members, Dr. C. L. Williams.

In performing this duty, it is peculiarly sad that only a few months ago we met to celebrate his seventieth birthday and wished him many years of usefulness and happiness. Therefore be it

Resolved, by the Muscogee County Medical Society, That this Society has suffered irreparable loss in the death of its most loyal and devoted member. Be it further

Resolved, That a page in the minutes be set aside for these resolutions, and a copy be sent to his family and to the Journal of the Medical Association of Georgia.

B. W. ALLEN,
H. STOKES MUNROE,
Committee.

THE MENACE OF PLAGUE.

Is there really danger that the bubonic plague, now smoldering in various places on the American continent, may burst out into the flame of active pestilence? American medical journals have not hid the facts, but none of them has sounded a clear note of warning. This comes from over the water. In its issue for July 11, *The Lancet* (London) sets forth what it conceives to be the facts of the case in brief and succinct fashion, and although perhaps they justify no present alarm, none of us can afford to pass them by or to minimize them. *The Lancet* heads its article, "Plague Clouds in the West," and it says:

"At the present time plague clouds are appearing on the horizon and threatening to approach the United States. Although some of these clouds may as yet seem small and at a considerable distance away, they cannot be altogether disregarded. We have already on many occasions called attention in these columns to the danger arising from the protracted and extensive epizootic of plague among the hordes of ground-squirrels which inhabit a large part of the State of California. American as well as other epidemiologists have long recognized the risks of a human epidemic originating at any time, by extension of infection from ground-squirrels to local rats, which often share the same burrows, and from rats through the agency of fleas to man.

"From time to time sporadic human cases of plague are reported in the affected districts of California, and these instances are invariably associated with infected ground-squirrels; the last reported case of the kind occurred this year in May, and was fully confirmed by bacteriological examination. To the north of California, and separated from it by Oregon, is the State of Washington, abutting on the Pacific. On the coast of this state is the rising port of Seattle, on Puget Sound, not very far from the Canadian frontier, having important connections with the interior by means of the Northern Pacific and other railways, and having also a considerable coasting as well as transpacific trade.

"At the end of last year plague-infected rats were discovered along the water-front of this city, and notwithstanding the strenuous local efforts to suppress the epizootic, other infected rodents have been found since then, week by week, up to the present time.

Only one suspected fatal case in man has so far occurred, but so long as the rat population of Seattle remains infected, so long will there be danger of the disease extending to man. A few days ago information reached us that on June 28 two persons in New Orleans had been attacked by plague; since then three more attacks have occurred with two deaths. Whether the first two cases were imported or were due to existing infection smoldering unrecognized in that city it is not possible as yet to say. Unless the sanitary condition of New Orleans has been greatly improved since 1912, it is hardly in a satisfactory state to resist the invasion of plague. The disease has also been occurring, in a dropping fire of cases, in the West Indian island of Cuba, which is under the protection of the United States, and with which it carries on a considerable commerce. . . .

"It is possible that the two first cases in New Orleans may have been associated with the plague infection now existing in Cuba, as there is much trade between these ports. Lastly, it may be mentioned, in view of the increasing connections now being established between the United States and the Isthmus of Panama, that plague, said to be of the pneumonic type, has been for some time and is still manifesting itself in Colombia, of which state the Panama Canal zone at one time formed part before its transfer to the United States. The correctness of the diagnosis of plague in the Colombia case has been denied, but it has to be remembered that many of the South American republics make a practice of denying pointblank the existence of plague and yellow fever within their borders in order to escape the inconvenience of quarantine.

"Another of the articles in *Public Health Reports* deals with some of the difficulties met with in the diagnosis of plague, mention being specially made of cases in which plague has been mistaken for filariasis; and an instance is quoted where a patient really suffering from filarial lymphangitis was thought to have genuine bubonic plague. The attention of practitioners in regions such as the West Indies, where filariasis occurs, was specially called to these cases. The Public Health Service of the United States has in its ranks a large number of highly trained and competent medical officers, many of whom possess special experience of plague gained in various parts of the world. The services of these experts would at once be

available in the event of the disease showing any tendency to extend beyond its present limits.

"Against this, however, is the assertion, made by those who apparently know, that some of the towns and districts likely to be invaded, if the infection spreads, are hardly in a satisfactory sanitary condition such as would enable them to repel successfully the insidious onset of plague. Perhaps the present season of the year is not altogether favorable for the immediate spread of plague in North America, but there is always the risk that the infection may gain a footing in one or more places where, under favoring conditions, later on it may break out with renewed virulence and spread to more populous districts in the interior."—Digest.

DR. NEWSOM LOCATES HERE.

Dr. Erle T. Newsom, of Union Point, who arrived in the city last week, has decided definitely to locate here. He has leased offices in the city hall building and will equip them with modern instruments and appliances for surgical operations and laboratory work.

Dr. Newsom is well equipped for the practice of his profession and will, no doubt, soon establish himself favorably with the people of Camilla and Mitchell county.—Camilla (Ga.) Enterprise.

DOCTORS TO KEEP TAB ON HOW PATIENTS PAY.

A special meeting of the Fulton County Medical Society will be held Friday night at Carnegie Library to organize a Physicians' Business Association. Its object will be to keep a rating of patients in the manner in which their bills are paid.

Imposition on the members of the society, it is believed, will be relieved through the rating, which will be indexed and distributed to all members.—Atlanta (Ga.) Georgian.

SOUTHERN MEDICAL ASSOCIATION.

Dr. H. H. Martin of Savannah is arranging a steamer trip for members of the Association who may desire to travel by water to the meeting in Richmond. The steamer will leave Savannah during the afternoon of Saturday, November 7, and arrive in Richmond Monday morning, November 9.

PHYSICIAN LOCATES HERE.

Dr. G. M. Anderson, of Pendergrass, Ga., arrived in the city this week with his family and will locate here for the practice of medicine. Dr. Anderson is a brother of Mr. H. C. Anderson, assistant cashier of the Planters and Citizens Bank. He has rented the residence of Mrs. Edna Einstein, on Broad street, and has had it fitted up for occupancy.

Dr. Anderson is a young man, but has had about five years' experience since leaving medical college and is well equipped for the practice of his profession.—Camilla (Ga.) Enterprise.

BOOK REVIEW.

The C. V. Mosby Company, Medical Publishers.

In reviewing the new edition of Hoyt's "Practical Therapeutics," we call your special attention to the arrangement. At a glance the reader can get the drug, its physiological action, and in most cases specific physiological action on different organs, such as the brain, spinal cord, heart, arteries, skin and intestines; the toxicology and its treatment; also the therapeutic indication and contra-indication. This is the only volume on this subject today that is so arranged.

It also contains a description and the use of all new and non-official drugs that have been passed upon by the Council of Pharmacy of the A. M. A.

It gives the combination and value of most proprietary remedies, and tells the dispensing physician what drugs he can use most satisfactorily to himself and his patient.

We also call your attention to the therapeutic index. As a time saver to the busy man, it is of great value. You will find this volume the Encyclopedia Britannica on Materia Medica and Therapeutics.

The more money The Journal of the Medical Association of Georgia makes out of its advertisements the less it costs the State Association to run the paper. This means that every member of the State Association has an interest in the advertising columns. If one business firm advertises and another does not, patronize the one that does. It is money in your pocket.

PROPAGANDA FOR REFORM.

Scopolamin-Morphin Anesthesia.—McClure's Magazine for June contains a sensational account of the use of scopolamin-morphin in anesthesia as used by Kronig and Gauss at Freiburg. In America the scopolamin-morphin anesthesia has received little attention. It is far from safe and can be carried out only in hospitals. Morphin and scopolamin should not be used in fixed proportions. (Jour. A. M. A., June 6, 1914, p. 1815 and 1829.)

Glyco-Heroin, Smith.—A report of the Council on Pharmacy and Chemistry explains that Glyco-Heroin, Smith, although containing 1-16 grain heroin to the teaspoonful, is exploited in a way to encourage self-drugging by the layman. The advertising matter suggests the administration of Glyco-Heroin, Smith, to children, and much of it has contained the evident falsehood that this heroin mixture does not produce narcotism or habituation. The possibility of habit formation should be sufficient to induce the thoughtful physician to avoid the use of Glyco-Heroin, Smith. (Jour. A. M. A., June 6, 1914, p. 1826.)

Wine of Cardui.—The Chattanooga Medicine Company claims that no more alcohol is used in Wine of Cardui than is needed to preserve it, and that it cannot be used as a beverage. In view of this the terms "booze" and "tippie" cannot be applied to the preparation. (Jour. A. M. A., June 6, 1914, p. 1827.)

Cystogen.—At a meeting of physicians recently, the question was asked: Why is Cystogen, which is just plain hexamethylenamin, not recognized by the Council on Pharmacy and Chemistry? The answer is simple: Because the therapeutically suggestive title as well as the method of exploitation encourage its indiscriminate and ill-advised use, both by the medical profession and the public. (Jour. Mo. State Med. Assn., June, 1914, p. 473.)

Buffalo Lithia Water.—The fallacy that diseases are due to uric acid and the fallacy that lithium would eliminate the uric acid has made mineral waters highly profitable—even when lithium was present only in infinitesimal amounts. One of the most widely used "lithia waters" was Buffalo Lithia Water, later called Buffalo Lithia

Springs Water, which has been declared misbranded by the Federal Courts because it was shown to contain less lithia than does Potomac River water and that a person would have to drink 150,000 to 225,000 gallons of the water to obtain an ordinary dose of lithia. The testimonials certifying to the high efficiency of Buffalo Lithia Water and its superiority to lithium compounds given in the past by physicians eminent in their profession, certify to the unreliability of clinical observations. (Jour. A. M. A., June 13, 1914, p. 1909.)

The Absorption of Iron.—The belief that organic compounds of iron were superior to inorganic iron salts arose before it was known that the bowels form the most important channel for the excretion of this element, whence the failure to find an increase in the amount of iron eliminated with the urine by means of the kidneys after ingestion of the element in some form or other was taken as an indication that it had not been absorbed. Today it is known that iron can be absorbed and excreted by the intestinal wall. Experiments have demonstrated that both inorganic and organic iron can be absorbed and satisfactorily carry out the purposes for which iron is administered. (Jour. A. M. A., June 13, 1914, p. 1913.)

Prophylaxis of Tetanus.—The following procedure is advised: Remove every particle of foreign matter from the wound. Dry the wound and treat every part with iodine or cauterize it with a 25 per cent phenol solution and apply a wet pack saturated with boric acid solution or alcohol. Inject as soon as possible, intravenously or subcutaneously, 1,500 units of antitetanic serum and repeat the injections if indications of possible tetanus arise. In no case close the wound, but allow it to heal by granulation. (Jour. A. M. A., June 20, 1914, p. 1964 and 1971.)

Beef, Wine and Coca.—This preparation, sold by Sutliff, Case & Co., Peoria, Ill., was claimed to contain about 15 per cent alcohol and 1-5 of a grain of cocaine to the fluid ounce. It was found to contain 23.75 per cent of alcohol by the federal authorities and accordingly declared misbranded by the courts. (Jour. A. M. A., June 20, 1914, p. 1981.)

Malt Nutrine.—This product of the Anheuser-Busch Brewing Association was declared misbranded by the government au-

thorities because the label claimed that it was a highly concentrated extract of malt, which was untrue. Malt Nutrine was found to contain 1.6 per cent alcohol and extravagant therapeutic claims were made for it. (Jour. A. M. A., June 20, 1914, p. 1981.)

Manadnock Lithia Water.—While extravagant curative claims were made for this "lithia water," examination showed it to contain only traces of lithia and hence it was declared misbranded under the Food and Drugs Act. (Jour. A. M. A., June 30, 1914, p. 1981.)

Buekhorn Lithia Water.—This water was declared misbranded by the federal authorities because false curative claims were made for it and because it did not contain enough lithia to be entitled to its name. (Jour. A. M. A., June 20, 1914, p. 1981.)

Sun-Ray Sparking Water.—While represented to be "the world's purest water," it was water to which sodium chloride, sodium bicarbonate and carbon dioxide had been added. Accordingly the company which sold the water was found guilty of misbranding under the Food and Drugs Act. (Jour. A. M. A., June 20, 1914, p. 1981.)

Hiceura Mineral Water.—This was declared misbranded because it was not a natural mineral water as claimed. (Jour. A. M. A., June 20, 1914, p. 1981.)

Raymond's Pectoral Plasters.—These are exploited untruthfully as "positive cure" for whooping cough, bronchitis, etc. (Jour. A. M. A., June 20, 1914, p. 1982.)

Liquid Albolene.—This is a light variety of liquid petrolatum marketed as a proprietary medicine, exploited in an objectionable manner and with more or less misleading claims. It is said to come from Russia and differs from American products in being entirely non-fluorescent—an immaterial difference. (Jour. A. M. A., June 27, 1914, p. 2048.)

Two of the advertisements appearing in this number of the Journal are from firms who have discontinued all advertising except in the various State Journals and the Journal of the A. M. A. The products put out by these firms conform in every particular to the requirements of the Council, and the manufacturers have been put to a considerable expense to make them do so. They have also

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It is especially adapted to the busy practitioner, contains the majority of modern methods of diagnosis of medical complaints, and the new matter introduced has been systematically classified. Pathologic sections deserve special mention, and the aim is to associate clinical symptoms with morbid lesions. Bacteriology is prominently mentioned under etiology; and the tabulated differential diagnoses scattered throughout the volume enable one to get a quick but thorough grasp of the situation in hand. Especial care is also given to the treatment of the individual diseases.

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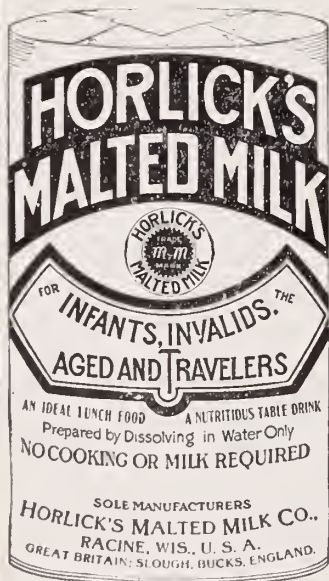
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SOME CARDINAL SYMPTOMS IN THE DIAGNOSIS OF APPENDICITIS.*

A. G. Little, M.D., Valdosta, Ga.

In both medicine and surgery the first thing to be accomplished in every case is to make a diagnosis. Our ability to correctly diagnose will determine our line of treatment, and upon our diagnosis and treatment depends our progress and final welfare of the patient.

In this paper I will not attempt to deal with the entire subject of appendicitis, but will, in a brief way, call attention to some of the symptoms that might help us make an early diagnosis, which is of the greatest importance. It is upon the general practitioners that the task of diagnosing and outlining the treatment falls, and on the early diagnosing and early decision as to treatment may depend the life of the patient. As in many cases, days, hours, and it may be even minutes will mean the saving of a life. State the facts to the patient and plainly urge upon them the importance of an early decision, showing them the danger in delay. The family physician may ask for consultation to confirm his diagnosis, but

the burden of deciding the course the patient will pursue rests with the home physician and not the consultant.

Normally the appendix is from two to five inches long, about the size of a goose quill, attached to the end of the cecum and located in the right illiac fossa. It is supposed to be under McBurney's or Monroe's points, but observation has shown in the majority of cases the ilio-cecal valve is under these points and that the entire appendix and part of the cecum is below these points. The location of the appendix is not always constant. It may be internal, external, or tucked under the cecum, or it may reach across and be found on the left side, or in the region of the liver. The fact that the position is not constant often leads to error. So, keeping in mind these briefly stated facts as to the location of the appendix, I will call attention to the symptoms that are usually most prominent and constant. They are:

1. Pain.
2. Nausea and vomiting.
3. Tenderness and rigidity of muscles.
4. Temperature.
5. Leucocytosis.
6. Pulse.
7. Tumor.
8. Posture.

*Read at meeting of Medical Association of Georgia, Atlanta, Ga., 1914.

Pain.

The initial pain is almost invariably referred to the region of the stomach and is naturally diagnosed as acute indigestion. The character of the pain is usually colicky and is always an initial symptom. In most cases it increases for the first few hours and then there is usually a letting up of the pain. Patients usually speak of it as a pain they have never had before, and one that ordinary remedies will not help.

Murphy says that, "The primary pain with the free appendix is always referred to the epigastric surface of the abdomen, but when it is imbedded on the Caput Coli, or fixed on the parietal peritoneum or adherent in the pelvis, the pain is then announced in the local position of the appendix." After the first thirty-six hours the pain usually loses its colicky nature but assumes aaching character, and is then usually located in the right iliac fossa. The sudden cessation of pain within the first thirty-six or forty-eight hours is usually held as a sign of improvement, but is not always a good omen for it might mean perforation or gangrene.

Nausea and Vomiting.

The nausea and vomiting is always primary and secondary. The first vomiting that comes on after the initial pain is reflex in nature and is caused by distention of the appendix by accumulating infected secretions. The first pain and nausea closely simulates the pain and nausea in renal colic. The secondary nausea and vomiting, which is always more persistent and comes on later, is due to the infection of the appendicular wall and the extension of the infection to the peritoneum.

Tenderness and Rigidity of Muscles.

During the first twenty-four hours the patient usually complains of general abdominal tenderness, and with rigidity of all abdominal muscles. As the case progresses and the inflammation in the appendix increases and the surrounding structures become involved, the pain, tenderness and rigidity become localized over the appendix. It is the exception to find a case without rigidity. I think if there is no rigidity of abdominal muscles, you had better look for some other troubles. About the time the pain, tenderness and rigidity becomes localized, the doctor makes repeated attempts to palpate the appendix, hoping to feel an enlarged

appendix. This, I think, is a dangerous procedure, because, in the first place, I do not think a normal or slightly enlarged appendix can be palpated. So, what can be gained by the procedure? Second, you only subject your patient to the risk of rupturing an acutely distended or gangrenous appendix, or of breaking up newly formed adhesions, the protection we are anxious to preserve. When rigidity begins to yield and the abdomen becomes flaccid convalescence is assured, but when it persists with the appearance to tympany, it indicates peritoneal inflammation.

Temperature.

Temperature is always present in the early stages of acute infected cases, though we cannot put too much stress on it, for it is usually an index to the degree of absorption rather than the extent of the condition. We can have a high fever due to good absorption with a slight involvement, or we can have a low temperature along with serious and extremely grave conditions. We can't always judge the condition we have to deal with by the amount of fever we find. A gradual fall is always more favorable than a sudden fall. But a sudden rise usually indicates an extension of the inflammation, or peritonitis. Such rises are in most cases an indication for immediate operation. Lyon says, "The temperature is absolutely no guide in determining the severity of the attack."

The Pulse.

The pulse, too, is of very little diagnostic value. You usually find a pulse quickened and of higher tension, while a rapid and feeble pulse would indicate peritonitis and a probable fatal termination. The condition of the pulse shows the degree of absorption, and not the extent of the inflammation. Douglas says, "A very rapid pulse at the outset usually means a grave infection and a progressively increasing pulse within the first twenty-four hours signifies advancing inflammation."

Tumor.

Very soon an apparent tumor is found in practically all cases, which if we would examine under an anaesthetic would disappear, showing that it was only the spasmodic contraction of over-lying muscles. Though in many advanced and sub-acute cases a tumor can be outlined. You will never find a tumor within the first few days.

Poecture.

Often we can learn something from noticing the position the patient assumes. We find them lying on their backs with their legs drawn up or side with their right leg drawn up. They will always tell you that it hurts them to extend their legs, while it gives them some relief when flexed. These, when taken with other symptoms, may be of value.

Lukocytosis.

Lukocytosis don't mean much to the general practitioner, unless he is able to use the microscope. But in hospitals and laboratories where they are prepared to do this work, much can be learned as to the condition and also as to the prognosis. Murphy says, "While I do not understand the relative value of leukocyte reaction in inflammation of the appendix, I consider it only corroborative." So, notwithstanding all the advances and discoveries the microscope has made, we must still practically rely on our clinical history.

In a typical case of appendicitis the signs and symptoms are usually so plain that in a few hours we can, with a degree of certainty, make a diagnosis. But we find many atypical cases which take days to be certain about. There are several troubles that might simulate appendicitis, so, for this reason, in some cases it requires time to make the diagnosis. For example:

First: In renal colic the stone in pelvis or in right kidney or right ureter often confound us. Absence of fever, tenderness and rigidity of muscles in the right iliac fossa and the sudden stopping of renal pain will help us.

Second: In affection of the right ovary or tubes. Usually a vaginal examination will give us much aid along with the previous history.

Third: In affections of the gall-bladder the history of previous attacks, with jaundice, gall stone pains, with pain, tenderness, and rigidity at a higher point than appendicitis.

Fourth: In children the principal trouble we have to differentiate is intussusception. In this we usually have blood in the stools, sausage shaped tumor, which is movable. The pain is usually severe and intermittent, while in appendicitis it is continuous.

Fifth: Sudden perforation of the gastrointestinal tract, such as ulcers of stomach

and duodenum, perforation of ileum, in typhoid fever, also of the gall-bladder. The most common of these is perforation in typhoid fever. The previous history of the case is the principal thing to consider. Johnson says, "A good many patients in the early days of typhoid have been operated on for appendicitis by competent surgeons."

If we will take time to study and analyze the symptoms of appendicitis, we will find that there are some symptoms that are always present, which are:

1. Pain.
2. Nausea and vomiting.
3. General tenderness with rigidity of muscles.
4. Fever.
5. Leucocytosis.

I would ask you to remember the five symptoms in the order I have mentioned them, and in every case of suspected appendicitis apply them in their order, and I claim you will find that they come in the order I mention, and I will go further and say if you can't find them in the above order, have some doubt as to whether you have appendicitis.

DR. DeLAMAR TURNER, JR., MOVED TO MILLEDGEVILLE.

Dr. DeLamar Turner, of Blythe, Ga., has moved to Milledgeville and will make this city his home in the future. Dr. Turner arrived last week, though his family came several days previous.

Dr. Turner is receiving a cordial welcome to Milledgeville and there is no doubt but that he will be a desirable acquisition to the medical world here as well as a splendid citizen.—Milledgeville News.

DR. W. H. CABANISS HAS MOVED TO ATHENS.

Dr. W. H. Cabaniss, a son of Hon. Emmett Cabaniss, who represented Oglethorpe county in the legislature, has decided to move to Athens and engage in his profession here.

He is already well known to a number of citizens here and they will accord him a hearty welcome to this city.—Athens Banner.

An advertisement in The Journal of the Medical Association of Georgia will bring results. Rates sent on request.

SUPRAPUBIC PROSTATECTOMY.***W. L. Champion, M.D., Atlanta, Ga.**

While the removal of the prostate gland was done early in the nineteenth century, more marked attention was attracted to the perineal operation by Knicker and Billroth in 1866, and the suprapubic method by Belfield and McGill in the eighties. Within the past ten years the improved technique, with the proper selection of cases, has reduced the mortality so low that prostatectomy has a place as distinct in surgical work as appendectomy. To one familiar with prostatic work it is an easy matter to make a diagnosis of prostatic hypertrophy, but it will not be amiss to outline some of the distinctive features present in this troublesome malady.

The patient is usually past fifty years of age and more frequently sixty. He is compelled to empty his bladder too frequently, more especially at night, which varies in frequency according to the amount of residual urine and congestion and inflammation present. The finger placed in the rectum will feel the enlarged gland which can be easily outlined. After the patient has passed his urine a soft rubber catheter is introduced into the bladder and from a few ounces to a pint or more of residual urine is obtained. If the length of the urethra is measured, it will be found nine or ten inches—an increase of one or two inches. The character of the urine will indicate whether the bladder is infected. If the case is of long standing, and especially if the patient has been using a catheter, the urine will be very cloudy, full of pus and probably some blood. No matter how old the patient or how long the trouble has existed, and even though there is a negative history as to gonorrhea, it is advisable to examine the urethra carefully so as to eliminate stricture. Atony of the bladder is present in cases of long standing. When the catheter is introduced, the urine does not flow freely, or flows with very little force unless pressure is exerted over the bladder. By cystoscopic examination we can determine the size of the gland projecting into the bladder, whether a stone or tumor is present. If a sufferer from hypertrophy of the prostate has reached the stage where he is very feeble and his kidneys are seriously involved, that is, to such an extent that his

temperature is found continually subnormal, a diminished amount of urea eliminated, and his mental condition wavering, it is always best to advise the continued use of the catheter, rather than increase the mortality statistics of prostatectomy.

There are patients in good physical condition who have gone for seven years using the catheter two or three times in twenty-four hours, and are apparently none the worse from the use of the instrument. But when it is necessary to use the catheter every few hours, it produces pain, causes hemorrhage, and is difficult to introduce. Removal of the prostate is indicated, provided the functional capacity of the kidneys is not seriously interfered with. A prostatic who is constantly carrying eight to sixteen ounces of residual urine in his bladder will sooner or later have involvement of the kidneys. The pressure in the bladder will cause dilatation of the ureters and pelves of the kidneys with renal congestion, which in time is followed by more serious pathological changes that may contraindicate relief by surgical means.

The time has passed when we should order a soft rubber catheter for every patient suffering with hypertrophy of the prostate. We will of course, continue to see cases where operative interference means death. Such cases should be instructed how to use the catheter. Give them the necessary instruction in regard to having the catheter aseptic, and make their lives as comfortable as possible.

It is surprising the amount of punishment a patient can undergo who is apparently not a good subject for prostatectomy. The removal of the obstruction, which is the direct cause of his system being poisoned and his vitality being sapped, seems to give him a new lease on life from the hour of operation.

The oldest case in which I have removed the prostate was seventy-six years of age; his weight was ninety-five pounds; he had complete retention, using the catheter very frequently, it being introduced with difficulty and considerable pain. This patient was to all appearances a bad subject for prostatectomy. I performed the suprapubic operation; the patient left the hospital in three weeks with the suprapubic wound closed. One of these small glands caused the complete retention which had existed for several months and the partial retention which had existed for several years. He is now enjoy-

*Read at meeting of Medical Association of Georgia, Atlanta, Ga., 1914.

ing good health, does not use the catheter, and the functional results are perfect.

There are patients who are forced to use the catheter eight, ten or more times in twenty-four hours. Their lives are miserable, and they come seeking relief from catheter life. Such patients should have relief by operative measures. This I removed from a patient who had become addicted to the use of morphia on account of pain and frequency of urinating. He was only fifty-six years of age. The gland was not very large, but produced sufficient obstruction to unfit him for business. This patient was gradually taken off the morphia and left the hospital in three weeks from date of operation.

The specimen you see here, with a small stone in the center, was removed on the first day of January of this year from a patient 70 four years of age who was in good physical condition. He had been suffering intensely for several weeks with partial retention. I performed the suprapubic operation, and the patient was walking around his room on the twelfth day and walked out of the hospital and left for his home on the nineteenth day.

My object in presenting this paper is to show the short length of time a patient is confined to the hospital after suprapubic prostatectomy, the good functional results following this method, and to present for your inspection several specimens that are so different in size, appearance and structure, and yet produce the same subjective symptoms, although, on physical examination we do not find the same amount of enlargement. The large specimen here exhibited in three sections is from a patient sixty-six years of age. He had only two ounces of residual urine. This adenomatous mass jutted out into the bladder, and through the cystoscope looked as large as a hen's egg. The two fibrous glands seen here, removed from patients sixty-two and seventy-six years of age, produced the same amount of obstruction which resulted in painful and frequent urination, retention and just as large a quantity of residual urine as the adenomatous masses shown in these two bottles. In two of the cases with the small fibrous glands there was a hard fibrous contracture of the vesical neck which would not admit the tip of the finger. This strictured condition was overcome by removing the small gland which acted as a valve. The gland was not the sole cause of the retention, but this fibrous contracture of the vesical neck, which is beautifully de-

scribed and illustrated by Chetwood in his work on the "Practice of Urology," was also a decided factor. Dilatation will not relieve permanently this contraction. Cutting of the fibers and removal of the gland are necessary to get a good functional result.

A great deal has been written as to which route is preferable for the removal of the prostate—the perineal or suprapubic. From the literature at hand it appears the majority of operators prefer the suprapubic. The approach is easier, the operation more thorough and the after results better.

As a rule patients requiring prostatectomy need preparatory treatment for the operation. On account of their age it is best not to keep them in bed. If the patient's bladder is infected, I fix a soft rubber catheter in the urethra so as to keep the bladder drained for forty-eight to seventy-two hours before the operation. This has a beneficial effect in getting the bladder in better condition and placing it in a quiescent or empty state, the condition in which it will remain for two or three weeks following the operation. Seven and a half grains of hexamethylaniline should be given every four hours during this period, and the patient required to drink from a half to a gallon of lithia water every twenty-four hours, and this continued up to the hour of operation. This I think an important requirement so as to have the patient, you might say, saturated with water, which will help to tide him over an ordeal which otherwise might prove fatal on account of faulty elimination by the kidneys. Two ounces of castor oil should be given the night before the operation, followed by an enema in the morning. The patient anaesthetized, the bladder should be thoroughly cleansed with a hot boric acid solution and sixteen ounces left in the bladder, with catheter left in position. The patient placed in the full Trendelenburg position, an incision is made from symphysis pubis upward four inches and down to the peritoneum. The peritoneum pushed upwards, the bladder is brought into view, and pierced in two places with curved needle threaded with catgut and left long. After incising the bladder, insert the finger and examine for stone, and note the character of enlargement. Insert one or two fingers of the left hand, which is covered with a rubber glove, into the rectum and press the prostate upward. In thin subjects it can readily be brought into view and incised with the scissors for enucleation.

The fingernail will take the place of scissors where the patient is fat and the gland cannot be brought into view. After boring through the covering, the finger is swept around the gland which is shelled out in a few minutes. Other lobes are treated in the same manner. The bleeding appears profuse, but is of little consequence, as it is readily controlled by the use of hot water. In none of the cases upon which I have operated has there been any trouble with hemorrhage. Place a large rubber drainage tube, with an additional eye, in the suprapubic wound down to the floor of the bladder, close the bladder snugly around the tube with chromic catgut. This is done to prevent leakage which delays quick union. The muscular layers and fascia are closed with catgut and the skin with silkworm gut. A number 14 or 16 French soft rubber catheter, with one or two additional eyes near the bladder end, is placed through the urethra into the bladder. After testing the catheter and suprapubic tube to see that water will pass either way, the catheter is fixed with adhesive plaster, the tube and catheter are connected with a glass Y, and patient put to bed. I emphasize the importance of using urethral drainage as the suprapubic tube can be removed on the sixth day, and if the catheter is allowed to remain, and drainage is perfect, the suprapubic opening is closed in ten days or two weeks, and the patient is not annoyed by being constantly bathed in urine.

If the patient is given the usual quieting dose of morphia before the anaesthetic is commenced, he does not, as a rule, require this drug after the operation. He should be given liquid diet for forty-eight hours. Lithia water should be given freely as soon as the stomach will permit. If there is nausea and inability to retain water, the drop method of a saline solution per rectum is commenced and continued until water is retained by the stomach. If gas accumulates in the intestines, give two ounces of castor oil and follow with soapsuds enema, or oil and glycerine high enema.

On account of the age of the patients suffering with hypertrophy of the prostate gland, there will always be mortality from operative interference; but if all of the cases are carefully studied, and those selected for operation which require it and stand a fair chance of recovery, the mortality will grow less and the functional results will be more satisfactory.

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DISCUSSION ON THE PAPERS OF DRs. CHAMPION AND BOYD.

Dr. Edgar G. Ballinger, Atlanta: My views are so much in accord with those expressed by Dr. Champion and Dr. Boyd that I do not think I have very much to say.

One point which I would like to emphasize in connection with prostatic work is the importance of removing the gland before the patient's health has been impaired by damage to the kidneys by back pressure. There is no point which will lessen the mortality to greater extent, and which is fraught with so much value to the patient, than to remove the gland before the kidneys are seriously damaged. If we find the gland is not very much enlarged, with residual urine, it is almost a dead certainty the patient will have trouble with that gland from the residual urine on account of the back pressure and serious damage will result. Therefore, I would urge that you do not postpone operation beyond a reasonable period.

As regards Dr. Boyd's paper concerning prostatitis, I would like to urge the importance of examination in every instance where a patient has urethral or bladder trouble, and I assume that every patient has prostatitis until I disprove it by examination.

Dr. C. C. Harrold, Macon: There are one or two things about the first paper read by Dr. Champion to which I desire to refer. A number of patients with chronic prostatitis and hypertrophy of the prostate unquestionably die without coming to operation, and in speaking of the preparation of them he referred to leaving in a retention catheter. I have had two of these cases in the last two years where even a catheter could not be introduced. In both cases suprapubic drainage was instituted for three or four days. In One case the catheter was left in seven days before operation, and I was then able to do something. Patients who live away from cities and have these conditions are likely to have complete retention occur when it is least expected, and if the local practitioner is not able to put in a catheter, if he intro-

duces a suprapubic trocar he can get these cases where they can be taken care of.

Speaking of leaving in a retention soft catheter after operation, Dr. Champion suggests anchoring it on the head of the penis with adhesive strips. Some one suggested using a button from the trousers or from off the coat, punching out the little center holes, and threading the catheter on that. I have found it difficult at times to anchor any plain catheter. If it is threaded on a button you can always tie the button in.

Dr. E. C. Jones, Atlanta: It is with considerable diffidence that I discuss this subject after so many good prostatic surgeons have talked about it. I did not hear all of Dr. Champion's paper, therefore I do not know what he said in reference to doing these operations in two stages. A great deal is said and known to be true to the effect that a person with an enlarged prostate suffers renal inactivity by reason of the back pressure, and that sudden relief of back pressure is apt to be followed by marked depression in the renal function which may be troublesome and indeed may cost the individual his life.

Last Sunday there came into the hospital under my care a colored man who said he was ninety-six years of age and was a body servant to Dr. A. W. Calhoun's father. He came into the hospital because he was passing blood. Attempts to pass a catheter had been ineffectually practiced, and he had a tumor which was evidently a full bladder. A catheter was finally passed, but nothing was obtained from the bladder except bloody material, and it was evident the bladder was full. Under novocain he was put on the table and suprapubic drainage done. Nothing else whatever was attempted, although a prostate presented like multiple fibroids which could have been removed in two minutes; but it was decidedly unwise to do anything more than was positively necessary, so that we left in drainage, thinking he would die in the period of depression. I understand he died yesterday as had been anticipated.

Dr. A. L. Fowler: In the operation for suprapubic prostatectomy, I think one of the wisest things we could do is to nerve block, because patients who have their nerves blocked before operation bear these operations always better than others, that is, those who are not so fortunate.

The secret of success in late years as re-

gards suprapubic prostatectomy is that in the majority of cases operated on surgeons have adopted the two step method. In other words, the bladder is simply drained at the first operation; a rapid suprapubic cystotomy is done lasting from three to seven minutes; a drainage tube of large size is introduced and the bladder simply drained, so that after ten days or two weeks or three weeks, or whatever time is necessary to get the bladder walls to regain their normal tonicity, the bladder becomes pure and sweet, so to speak, as a teacup; the prostate also goes down anywhere from twenty-five to forty per cent in size, and the patient has regained wonderfully his vitality, so that he is in a much better state physically to stand a suprapubic prostatectomy which follows. But in all these cases I think the nerves should be blocked because they have not the result of a shock.

In speaking of what Dr. Jones discussed just now, sudden relief of tension as a result of back pressure on the kidneys, the cause of death seems to be the sudden relief of tension, and I would like to emphasize this in connection with prostatic work, that I do not think that there is any doubt but more people are killed as a result of catheterization than are killed by operative measures for the enucleation of the prostate.

Dr. M. L. Boyd, Atlanta: I would like to call attention to the fact that practically in all cases of hypertrophy in which you cannot pass a catheter you will find that you can do so if you use the right kind of instrument. The only case in which I was unable to pass a catheter was one in which I was much chagrined because I did not use the right kind of catheter. I tried a dozen different kinds. If you can pass a catheter it makes drainage of the bladder by trocar unnecessary, and the fact is that you get just as good results by the introduction of the catheter and drainage of the bladder and kidneys by means of the introduction of the catheter just inside and retained, making it unnecessary to do previous cystotomy for drainage of the bladder. The catheter is easily kept in, especially any of the linen or silk catheters which are readily borne and can be removed. It can be fastened with adhesive strips which run down outside the catheter over the penis, a small band around the penis applied loosely, and a cork put in the end of the catheter makes it easy so that they can get up and about and walk around

just as though they were voiding urine normally. The question between the perineal and suprapubic route of operation had for its solution a number of points. The principal advantage of the suprapubic route seems to be entirely from statistics which have come out by the general surgeons of this country, and it is claimed that incontinence following suprapubic prostatectomy is less than that following the perineal route; also healing of the fistula in the suprapubic operation is better than that in the perineal. However, in the hands of the individual skillful operator it has been shown that healing of the fistula and incontinence which follows perineal prostatectomy is just as good as that given out for the suprapubic. The point is this: The suprapubic operation does not require by any means in the average case the skill required to do the perineal prostatectomy. A perineal prostatectomy is a difficult operation. It is not at all simple, and where a man is not familiar with the ground and the steps of the procedure he is apt to cause a considerable amount of damage not only to the prostatic portion of the urethra, but the membranous urethra which, of course, the patient is dependent upon largely for urination afterwards. It is a question of knowing how to do both operations. A great many cases are operated upon by the suprapubic method and a number of cases are suitable for the perineal operation. Cases of small prostates show that the prostate can be much more easily enucleated by the perineal route, while in the other cases the prostate can be much more easily taken out by the suprapubic route.

Dr. W. L. Champion, in Closing: I want to congratulate Dr. Boyd on the paper he has presented to the Association. This is a very important subject, and it is one that is overlooked too frequently. Take a man who is suffering from gonorrhea and is being treated by a physician who never feels the prostate, but who gives the man a common injection with some medicine to be taken internally; that is a practice that ought to be abandoned entirely, as there are diseases and conditions of the prostate independent of gonorrhea that need careful attention and certainly ought to be treated more carefully than they are now. I congratulate him on his paper.

Dr. Boyd, in Closing: I want to thank the gentlemen for the attention and considera-

tion they have given my paper, and I want to add one more point, and that is, it is not at all uncommon to get a urethral discharge in chronic cases of prostatitis. I have seen a great many such cases reported in the literature and organisms have been found in the anterior urethra which are difficult to tell from ordinary gonococci by the ordinary microscopic means. In cases of urethral discharge which is slight, and which is immediately treated as gonorrhea because a few suspicious organisms are found, I would urge that a thorough investigation be made of the prostate in all such cases, and I think you will find that number of gonorrheas in four or five days will be found to be prostatitis.

THE DIAGNOSIS OF DISEASE OF THE ACCESSORY SINUSES OF THE NOSE.*

J. T. Maxwell, M.D., Savannah, Ga.

There is no one symptom which alone may be relied upon to make the diagnosis of sinus disease. Although when the various symptoms are understood, the diagnosis should not be difficult.

Pain, tenderness over the sinuses, discharge from the nose, occlusion of one or both nasal chambers, asthma, and attacks of sneezing or coughing, are the most common complaints which cause the patients to seek relief.

Acute inflammation of the accessory sinuses with or without obstruction may be accompanied by more or less pain. Should the drainage be obstructed the pain will be very great. Affections of the frontal, ethmoid, and maxillary sinuses frequently produce pain over the areas involved, but ethmoid disease may produce pain in the top of the head, and chronic sphenoidal sinusitis may cause pain in the temple or occiput. Exceptions are so numerous and pain is so often referred to other locations, that as a localizing symptoms it should be used in connection with other findings. It is a common occurrence to have a patient come in complaining of pain behind or in the eye. Not long ago a man came into my office holding his hand over his eye. He complained bitterly of violent pain in his right eye which had kept him from sleeping for three or four nights. Drainage and ventilation of the anterior ethmoidal cells on the right side re-

*Read at meeting of Medical Association of Georgia, Atlanta, Ga., 1914.

lieved him entirely of his pain in a few hours.

Headache resulting from sinus affections is one of the common symptoms associated with the disease, and yet it is frequently not recognized and patients go for years taking various cures for chronic headache, when the real cause is entirely overlooked. As an undivided symptom indicative of disease of a particular sinus it is not reliable, but its presence or absence in the whole symptom complex is very important. The pain of supraorbital neuralgia must not be confused with frontal sinus pain. Since the supraorbital nerve lies in the notch at the junction of the inner and middle third of the upper margin of the orbit it is normally more sensitive than the bone of the upper inner angle of the orbit. This is even more marked in supraorbital neuralgia, while in frontal sinus disease the reverse is true and the orbital wall of the frontal sinus is very much more sensitive than the orbital margin. Tenderness over the base of the frontal sinus and the os planum of the ethmoid is often of great service in diagnosis of disease of these parts. This may be elicited by placing the thumb by the side of the eye far back into the orbit and pressing upward against the floor of the frontal sinus or inward against the wall of the ethmoid. Acute disease in the maxillary sinus is frequently accompanied by tenderness over the sinus. Comparison should always be made with the sound side.

Pain and headache caused from sinus disease is nearly always intensified when the head is lowered as in the act of stooping over to lace the shoes.

Discharge from the nose or backward into the throat is frequently the only symptom which disturbs the patient, and is often accompanied by no pain or other discomfort whatsoever. If the secretion reappears in the same spot in the nasal chamber shortly after having been removed, the evidence is positive that a reservoir of pus in one of the sinuses is underlying. The discharge may be constant or intermittent according as to which cavities are infected. It may be thin and watery, or thick and tenacious.

However, in many cases the small openings from the nasal chambers into the sinuses may be occluded from swelling of the mucous membrane lining, or from swelling of the middle turbinate bone, and no discharge at all is in evidence. The majority of the cases which come under the observation of a specialist in this line have been treated only

by nose sprays. When one stops to consider the anatomy of the nose and the tiny openings from the nasal chambers into the sinuses, it is evident how impossible it is to reach the seat of infection in the sinuses by a nose spray alone.

In chronic sinus disease, one of the common symptoms is nasal polyps. Whenever a nose is occluded by polypoid growth it is safe to conclude that there is sinus disease also. And to remove the polyps with a snare without going farther into the cause simply means that the patient will return in a short time with a recurrence of the trouble.

I have seen patients in which violent attacks of sneezing were the only complaints. Examination in these cases showed ethmoid infection with polyps in the nasal chambers and also in the ethmoid cells.

Asthma and coughing are often the chief disturbing symptoms in sinus infection. Two years ago in Omaha I saw a man who complained that his nose had been occluded for years, and that at night his sleep was so disturbed by terrific attacks of asthma and that he was gradually running down in health. Examination revealed a nasal polyp hanging down from behind the soft palate and extending forward into the anterior nares so far that it could be seen in both places without the use of artificial light or head mirror. Removal of the polyp with drainage and ventilation of the frontal, ethmoid, and maxillary sinuses on one side, affected a complete cure.

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OIL-ETHER COLONIC ANESTHESIA.***Julian C. Pate, M.D., Valdosta, Ga.**

In reading a paper on the subject of anesthesia, and especially the one which I am to read for your consideration today, one should at first consider the many factors which enter into the administration of anesthesia, such as moisture, heat and oxygen. For this reason figures of former years have less value to us at this time than if we were continuing the methods previously employed. Nevertheless it would be foolish for us to go blindly forward without taking into consideration the statistics collected and make an intelligent comparison therefrom.

In discussing oil-ether anesthesia, we should make no mistake to frequently repeat from Gwathmey of New York, the originator of this method. If subsequent experiences confirm the results in the cases that I have given with the technic outlined by Gwathmey with few changes, the medical profession is indebted to Dr. Gwathmey for his important advance in modern anesthesia.

Oil-ether colonic anesthesia is an evolution from intra-spinous and intra-venous anesthesia, and it will be well to bear in mind that this method is only in the stage of experiment. Experience has taught those most interested in this work that olive oil is the best vehicle for ether, because this oil parts with the ether in about one-fourth the time than other oils do; and also because the combination seems to be less irritating to the mucous membrane.

To a practitioner compelled to work alone, this method of anesthesia would be of inestimable benefit. On account of the gradual and equal absorption of the ether from the colon and also on account of its rapid evaporation from the lungs, it appears to be at least a comparatively safe anesthesia. Mucous and saliva are absent, and the patient's stomach and lungs are spared. I think the time will come when other drugs beside ether will be given with this method of anesthesia. With this method the reflexes remain active, the brain being less under the influence of the anesthesia than the lower portions of the body, and a free pain period lasting from one to three hours follows the return to consciousness.

The preparation of the patient should be

the same as for ether vapor anesthesia. In giving the technic I will repeat after my paper published in the Association Journal of March. First clear out the colon with a plain solution, and be sure to use high irrigation, and repeat same until the fluid returns clear. Now inject from five to ten grains of chlorotone, together with two drachms each of olive oil and ether, about five inches into the rectum. At the same time give hypodermically one quarter of a grain of morphia and 1-150 grain of atropine for an adult, half an hour before the operation.

Then insert a small rectal tube about five to six inches into the rectum, and with external end of the tube attach a small glass funnel. Now by gravity slowly you pass into the rectum a 75 per cent solution of ether and olive oil, using one ounce of the mixture for each twenty pounds of body weight of patient. Nareosis usually follows within five to seven minutes after the completion of the injection. I make it a rule to take at least five minutes to let the solution flow into the rectum, and the best plan is to allow about one minute for each ounce of the mixture to flow in.

Should loss of reflex or forced breathing occur, you can draw off the solution by means of a small catheter placed in position, and if the amount drawn off is not sufficient you can wash the rectum out, using two catheters. Place both into rectum at the distance of about five and one-half inches, and by passing cold water and soap suds into one with funnel attached, the solution will flow out the other.

Under this anesthesia the patient breathes quietly, as if asleep from natural sources. After the operation the rectum is washed out thoroughly with cold water, and about three ounces of olive oil injected and patient returned to bed.

The physiology of oil-ether colonic anesthesia is interesting, and must be understood to administer the anesthetic intelligently. The breathing in all instances is perfectly normal. If stertor commences, it is an indication of unnecessary deepening of the anesthetic. Cyanosis should not occur at any time. As stated above, the reflexes are quite active, especially the lid reflexes. The pulse depends on the preliminary medication, and the face is never flushed, as it is in giving ether by inhalation. As ether separates from the oil, it assumes the form of a gas and is taken up by the blood. It then passes to the

*Read at meeting of Medical Association of Georgia, Atlanta, Ga., 1914.

lungs, where a part is excreted and lost, the remainder is reabsorbed and thence to the brain. As a large quantity of vapor is lost by inhalation, the brain is never so deeply narcotized. This probably accounts for the wide latitude of safety provided by this method.

The first thing noticed by a patient undergoing anesthesia by the oil-ether colonic method is a loss of sensation of the lower extremities, showing a sensory paralysis, the higher centers of the brain being the last affected. This observation seems to be verified by the manner in which the patient comes out from the influence of the oil-ether anesthesia. Consciousness is regained long before the sensation of pain is manifested.

This method is especially indicated in work around the head and neck. Of course, this method would be contra-indicated in any case where you have a pathological lesion of the lower bowels, such as colitis, fistula in ano, hemorrhoids, etc. This anesthesia is automatically safeguarded by the gradual and equal absorption of the ether from the colon, and at the same time its rapid evaporation from the lungs.

The advantages of this method over all others are, namely:

First. The element of apprehension and fear caused by placing a mask over the face as in inhalation anesthesia is avoided.

Second. No expensive apparatus is required.

Third. The after effects of the anesthetic are reduced to a minimum.

Fourth. The more complete relaxation secured.

Fifth. The limits of safety are widely extended, compared with other methods.

Sixth. A more even plane of surgical anesthesia is maintained.

In conclusion the writer would like to make a full report of some of the cases given by himself.

The first, that being the one published in the Journal of March, was that of a negro woman, who aborted the night before and was still suffering from hemorrhage. A curettement was thought best and was started. Thinking this a good case to try this new method on account of finances, I so proceeded.

Patient was given two high colon irrigations and at that time the fluid returned clear. I then gave the patient a hypo of morphia and atropine, as given by the in-

halation method. About thirty minutes before the operation was started I gave two drachms of equal amounts of olive oil and ether mixed with ten grains ehloretone into the rectum. As the patient weighed 120 pounds, according to patient, I then injected about 5½ inches into the rectum, six ounces of a 75 per cent solution of ether in olive oil. This is the proportion that Gwathmey outlined, that being one ounce to every twenty pounds of body weight. I assumed about six minutes to let this solution drain into the rectum. Within four minutes after the completion of this procedure the patient was asleep with no loss of reflex. Operation was completed in about ten minutes, and patient turned straight in bed, making an uneventful recovery.

Case No. 2. F. N., boy, 13 years old, operation: circumcision. One-twelfth of a grain of morphia was given by hypo, and at the same time one drachm of ether and olive oil was injected into the rectum after getting the colon in readiness. Five grains of ehloretone were also given with this mixture. All this was done thirty minutes before the operation. As the boy weighed about 80 pounds, I introduced very slowly a four-ounce solution of a 75 per cent ether and olive oil, the patient falling asleep as soon as the full amount was introduced, sleeping quietly throughout the operation, and making an uneventful recovery.

Case No. 3. G. R., white woman, weighing slightly over 100 pounds and about 34 years of age, was operated upon by myself for a cervical tear. She was given one-quarter of a grain of morphia and 1-150 grain of atropine hypodermically. She was also given two drachms of ether and olive oil at this time into the rectum.

Testing the strength and amount of the solution, I gave seven ounces of a 75 per cent solution of ether in olive oil as an anesthetic. This patient gave symptoms in a few minutes, as respiratory arrest occurred after she was placed in position on table. Artificial respiration, stretching of spincter, and straightening introduced. Respiration began shallow. I then released clamp on tube and let out of rectum a little over an ounce of this solution. All this time the pulse remained full and regular, and practically normal. The color also remained good. Operation was satisfactorily performed and patient returned to bed, making the usual recovery with no nausea.

Pulse was at this time 76, and respiration about 18 per minute.

In each of the above cases at the completion of operation the rectum was washed out with a cold soapsud solution and light massage used over descending colon to express out the waste. Then two ounces of olive oil were injected.

Of the total number of cases of anesthesia given with this method, which was six, I have only had one bad result, and that was given to you in case above.

In conclusion let me say that I think the time will come, especially if future experiments confirm those up to date, that all ether anesthesia will replace the inhalation method in most cases.

DISCUSSION ON DR. PATE'S PAPER.

Dr. L. C. Allen: I would like to ask the doctor his object in using the chloretone?

Dr. Pate, in Closing: I would like to tell the doctor, if he will notice in operative work of late years, surgeons are using chloretone to prevent nausea. Out of six cases I never had one who had nausea. In one of my cases there was a diagnosis of tuberculosis made. The procedure was rather empirical, but it worked in that case, and it will be a solution of the problem where we have a tubercular patient to deal with in using this method of anesthesia.

ATHENS PHYSICIAN IN MEDICAL PAPER.

Dr. John A. Hunnicutt, Jr., of this city, has in the current number of the American Medical Journal, the highest grade medical publication in the country, a fine technical article on "The Thyroid Gland," dealing with the location and causes of goiter.

To be a contributor to that periodical is evidence of unusual national recognition. Dr. Hunnicutt's work in Johns Hopkins attracted attention along this line.—Athens Banner.

Dr. T. Dewitt Jones has decided upon Alma as a location for the practice of his profession. He has moved his family here from Zirkle and will make this his permanent home. He is welcome adjunct to the city and Alma is fortunate in having this excellent family locate within her limits.—Alma Times.

HIGH FORCEPS AND CESAREAN SECTION.*

Archibald Smith, M.D., Atlanta, Ga.

Since the publication of Chamberlain's secret for aiding women in difficult labors in 1725, the obstetric forceps has become an indispensable part of every obstetrician's armamentarium, and for nearly two centuries they have been supreme as a means for assisting the forces of nature to overcome the difficulties of delivery, when they were insufficient for the occasion.

Many and great modifications of these instruments have been made, but those which have stood the test of time and use best are the models of Simpson, Elliott and Tarnier. These are about as perfect in mechanical construction and efficiency as they can well be made, and it is not likely that any means, either mechanical or medicinal, will ever supplant them, for in properly selected cases they are very efficient, especially where the difficulty lies in lack of propelling force on the part of nature, or only a moderate excess of resistance to the advancing part. The man who says that high forceps should be relegated to the junk heap is advising us to throw away an instrument which will at times prove of great service to us if used under proper indications and with reasonable care and skill. However, these instruments fall far short of what might be desired, in many cases failing entirely to effect delivery and in others doing such damage to one or both patients as to make some other method of delivery far preferable. Especially is this the case where the disparity between the size of the child's head and the pelvic bones is such as to require great force for its passage, or where conditions demand rapid delivery before the head is engaged or dilation has taken place, as in antepartum eclampsia or placenta previa.

The more I see of high forceps the more I think of cesarean section in such instances, and I think the following case reports will give some pretty good reasons for doing so.

Case No. 1. M. S., colored, single, age 18. Para 1. Previous and family history unimportant, except that patient was rather late in walking.

Was called out beyond the city limits one morning by a medical student to assist in de-

*Read at meeting of Medical Association of Georgia, Atlanta, Ga., 1914.

livering this patient, after she had been in active labor about twelve hours, and had had the cervix artificially dilated and the membranes ruptured, to facilitate labor.

Examination showed temperature 99, pulse 96, a large child with a vertex presentation and left occipito posterior position, cervix dilated, membranes ruptured, head not engaged, and a conjugate diagonal of $10\frac{1}{2}$ cm., making the true conjugate $8\frac{1}{4}$ cm., with a narrow outlet. A Cesarean section was considered, but owing to the fact that considerable manipulation had been done in the cervix, and as surroundings were poor and assistants insufficient, it was decided to attempt forceps instead. The lack of liquor amnii and contraction of the uterus contra indicated a version as well as the difficulty of delivering a living child through such a contracted pelvis by this method.

Forceps were first applied at 8 a. m. and an attempt made to pull down the head in the original position, but no reasonable amount of force would make any progress, so it was then attempted to rotate it anteriorly with the forceps, but this was not successful. It was then attempted to rotate it by grasping it with the hand, though with no better results.

On passing the hand into the uterus to see the cause of the trouble, it was found that the left shoulder of the child impinged firmly on the sacral promontory of the mother, thus preventing rotation. This was corrected by raising the shoulder up with the fingers of one hand while external pressure was made by the other, aided by the assistant. This succeeded in producing rotation into the left occipito anterior position.

Forceps were then reapplied, and with a little more than an hour's hard work a child weighing $10\frac{1}{4}$ pounds was delivered a few minutes after 12 m. Heart action, though very slow, was still evident, but ceased before respiration could be established.

The mother stood the operation very well, but was lacerated to the sphincter and a little cut in the anterior and lateral portions of the birth canal; these were repaired, and aside from a considerable discomfort and a little fever, she made a good recovery.

There was not a dry thread in my shirt when the job was finished, and I felt for a week like a student in the beginning of football practice, or a country boy during his first week of spring plowing.

Case No. 2. G. H., age 29, married nine

years. One miscarriage six years ago, followed by infection and a bad case of pus tubes, for which she had been under my care for several years. Menstruation had been rather irregular, making time of expectancy uncertain.

Measurements: Interspinous 22, intercrural 24, external conjugate 18, conjugate diagonal $10\frac{1}{4}$. Estimated true conjugate $8\frac{1}{2}$ centimeters. She was advised to have a Cesarean section, but refused and insisted on being delivered by natural methods.

A peculiar and very fortunate feature of this case was an exaggeration of the normal uterine contractions during the last month of pregnancy, which were of sufficient force to mould the head in a very great degree and force it down in the pelvis, so that the vertex was on the pelvic floor before active labor set in, though the chin could be felt high above the symphysis. This case could not, therefore, be strictly called a high operation, though for difficulty of accomplishment and traumatism inflicted on the mother it was one of the most serious cases I ever undertook. Patient fell in labor at midnight, and by 8 a. m. pains were strong, but by 8 p. m. scarcely any progress had been made. Examination showed vertex low in L. O. P. position, with chin palpable high above symphysis, pains strong every four or five minutes, but having very little effect, membranes ruptured and cervix a bare ring. Mother and child in good condition, though the former was becoming tired.

Patient was anesthetized and a pair of Tiemans Tarnier forceps applied. Forceful traction was required to effect any progress and the forceps were removed and reapplied a number of times in order to prevent, as far as possible, injuring the head by continued pressure on one spot. The head rotated anteriorly, and a living child was delivered after one and a half hours' hard work. In spite of the care taken there were several deep cuts on the child's head, the perineum was lacerated deeply in both sulci and the lateral walls of the vagina cut to the bone on both sides. No more blood was lost than in a normal labor, but the patient showed marked shock, the pulse being 120 and temperature sub normal.

This patient suffered severe local and general pains for two weeks, and was partially paralyzed in the lower extremities for a month, but she and the child both made a good recovery.

Since these cases I have seen several patients severely lacerated or cut on the lateral walls of the vagina, where there was no slipping and apparently no other fault of technique, the trauma seemingly being due to pressure on the soft parts, between the outer surface of the blades and the bony walls of the pelvis, the latter being too small to accommodate the child's head and the instrument without great pressure.

This injury, I believe, is much more common than usually supposed, for since first having my attention forcibly called to it, it has been observed in nearly every difficult forceps operation I have come in contact with, and I do not see how it could be well avoided, considering its mechanism.

Case No. 3. Mrs. C. B. This patient illustrates both sides of this question, as her first delivery started as a high forceps and ended as a craniotomy, while the second was a primary Cesarean section.

Age 19. Para 1. Married one year. Short, chunky build. Previous history unimportant. First menses at 14, last July 13, 1911. Pelvic measurements, inter cristal 25 cm., inter spinous $22\frac{1}{2}$ cm., external conjugate $17\frac{3}{4}$ cm., internal conjugate diagonal $10\frac{1}{2}$ cm., true conjugate $8\frac{3}{4}$ cm. About Christmas patient had a little swelling of face and feet with small amount of indican and albumen in the urine; was ordered to take milk diet, but ate other things. January 14 had headache with increase of swelling and albumen. As she was about term a catheter was introduced to start pains and patient given a dose of salts.

At midnight I was telephoned that she was having convulsions, so called Dr. Battey and went at once, finding her in her second convulsion, with os only admitting two finger tips, maternal pulse 104 and fetal 136, presentation vertex, position R. O. P., head not changed.

Cesarean section was considered, but abandoned, on account of poor surroundings, too few assistants, and last, but not always least, the objection of the family. It was imperative to get the uterus emptied as soon as practicable, so forced dilatation and high forceps seemed to be the second choice. Accordingly patient was anesthetized, cervix dilated as rapidly as possible, and Tarnier's forceps applied, but failed to cause engagement. The head was then rotated anteriorly but could not be brought down in this position, even after vigorous traction. By this

time the patient was cyanosed, sweating freely, pulse was around 150, irregular and very weak; so the family was informed that we would have to destroy the child and would do well to save the mother.

The head was perforated and delivered with some difficulty, and the clavicles cut before the shoulders could be delivered.

Aversion was not done because of the critical condition of the mother and the very small chances of delivering a living child by this method when such vigorous attempts with forceps had not even been able to effect an engagement.

The perineum was lacerated into the rectum for about an inch and a half, and considerable damage done the anterior part and lateral walls of the vagina. The perineum was repaired as rapidly as possible with a running chromic suture in the rectal wall, two bites of which held together the torn ends of the sphincter. The edges of the levators were brought together by deep chromic sutures, and the remainder closed with silkworm gut; this only took about ten or fifteen minutes and no further anesthesia was used. When it was completed, the pulse was around 160 and at times almost imperceptible, patient of an ashy hue with marked sweating and shallow respiration.

With heat and stimulation she rallied nicely and made a good recovery, considering her condition, though there was some sloughing of the injured parts, but the deep muscular sutures in the perineum held well and gave a perineum with fairly good mechanical support.

Patient came to my office in September, looking well and about two months pregnant. This time it did not take much argument to enforce proper diet or show her that a Cesarean would be the best method of delivery, especially as she was anxious for a child. In April a little albuminuria and headache appeared in spite of careful treatment, so being at term she was taken to the Georgian Hospital and delivered by section April 15, 1913, the high incision being used. The uterus was closed with chromic gut in the muscle and plain in the peritoneum, and the abdominal wall in the usual manner, the operation taking twenty-seven minutes. Drainage was good and except for temperature about 99 for a week she got along smoothly till allowed to go home on the tenth day at her urgent request. Two days later temperature 102, pulse 148, respiration 22, left leg pain-

fully tender and swollen, uterus firm and not unduly tender. Diagnosis, thrombophlebitis. Treatment, milk diet, purgation, protoiodide of mercury and salicylate of soda by mouth, with ichthyol and ice locally. Temperature ranged from 99 to 103 2-5, becoming normal in four weeks. Swelling in leg gradually subsided and patient made a slow but good recovery.

Mrs. C. W., age 23, married 4 years. Para 1. First menstruation about fifteen, last on October 15, 1912. Previous history, rather delicate and suffers with indigestion; otherwise negative.

Examination shows slightly built woman with rather narrow hips, external and internal genitals small, difficult and painful to examine with more than one finger, uterus anteфлекed, and cervix very small.

Patient had severe nausea with vomiting, constipation, and pain in the epigastrium.

A very guarded diagnosis of pregnancy was made and patient put on medical treatment and diet which controlled the nausea in a measure, though it persisted at intervals for some weeks, and subsequent signs confirmed the diagnosis of pregnancy to be correct.

Pelvic examination showed the following measurements: Inter spinous 20½ cm., inter cristal 26½ cm., external conjugate 17½ cm., right and left oblique 19½ cm. and 20 cm., external conjugate 17½ cm., internal conjugate diagonal 10¼ cm., which would give a true conjugate of 8½ cm., with no abnormality in height or angle of the symphysis; pelvic outlet 8½ cm., with narrow sub pubic arch.

Near term presentation was vertex position R. O. P. Head rode over edge of symphysis and could not be made to engage.

In view of the very small soft parts and the small pelvis it looked as if a Cesarean would likely give the best results if it did not prove a necessity.

Consultation was asked for and an obstetrician of large experience called, and the consultant suggested that the patient be allowed to fall in labor, taken to the hospital and given a fair trial before doing the section. Pains began June 25 at noon. I was called at 7 p. m. and found pains every ten minutes and fairly strong, so took her at once to the hospital. Pains were active all night, but at 3 a. m. little progress could be noted, and another well known obstetrician was called in who expressed the opin-

ion that the labor would be normal or at most a forceps case. By noon, however, the cervix was half dilated, the membranes low and not ruptured, and in spite of strong pains the head had not progressed noticeably since early morning. The patient was beginning to tire and readily consented to any means of quick relief. She was, therefore, prepared for operation and with the assistance of Dr. Battey a high Cesarean was done. Everything went smoothly and the operation was completed in a little less than thirty minutes, normal saline being poured into the abdomen before closing. The only thing which did not look well was a rather rapid pulse at the completion of the operation, but as soon as the patient began to come out from the ether she began to complain of severe cramps in the upper abdomen, and could not get any relief from hot applications and similar remedies. Patient looked badly, face pinched and covered with sweat, pulse weak and continued to glow more rapid till at 2:30 it was 154 and pain still increasing. No distension was noticed and no excessive flow from the vagina, so it was thought that a reopening of the incision was imperative. Consequently this was done under gas at 3 p. m., but no abnormal condition of the intestine could be found and no possible source of hemorrhage except a very small rent in the lesser omentum, which did not appear to be bleeding; the uterus was well contracted and no sign of bleeding from the incision. There were about six ounces of bloody fluid in the abdominal cavity, which seemed to be mostly saline. This was sponged out and the rent in the omentum closed with fine silk, the abdomen closed and the patient put to bed in as good or better shape than when the operation began, though nothing satisfactory was found to account for her condition.

She soon aroused and began to complain of cramps again, but they decreased rapidly in severity, with a corresponding improvement in her condition. She ran a temperature from 99 to 101 and complained of considerable tenderness around the uterus for about ten days, but otherwise made a good recovery, and she and the boy are both now enjoying their usual good health.

Reviewing these cases, which are fairly good samples, we see that all four patients had true conjugates of over 8 cm., which is barely considered a relative indication for Cesarean by most text books on the subject,

and of the three deliveries attempted with forceps, one ended as a craniotomy and eliotomy, in a second the child was practically still-born, and in the only one where the child survived, it was cut to the bone in several places by the forceps, in spite of great care to prevent this accident. All the mothers were badly lacerated, two of them severely so. In the fourth patient where forceps were not attempted, eighteen hours of active labor failed to engage the head, showing that a forceps operation would be very difficult and dangerous, if not entirely futile.

All these mothers were badly lacerated and suffered a great deal during the puerperium, one being scarcely able to walk for a month.

Most of these lacerations of the birth canal can be repaired so as to give fairly good results, but in many cases this is difficult or impossible, owing to the lacerated and contused condition the parts are left in and the difficulty of keeping things clean in such close proximity to the excretories of the body. Furthermore, the injured parts are subjected to considerable strain, from the weight of the superimposed structures and intra abdominal pressure, and when they are weakened, are likely to give way, causing serious displacements of the pelvic organs. Skill and good surroundings will mitigate these evils in a considerable measure, but they cannot be eliminated under the best of conditions, even by the most skillful attendants.

In the two cases of Cesarean section, both of the patients were in excellent condition in a comparatively short time after delivery, in spite of the complications from which they suffered, and both have living and healthy children.

While Cesarean section cannot be recommended as an easy and quick way out of all difficulties in obstetrics, it certainly has many signal advantages over other methods of delivery, where there is marked obstruction to the progress of the child, or great cause for haste in delivery; for the operation can be done with less shock and traumatism to the patient than any other, and is absolutely sure of accomplishing delivery in all cases except where the head is impacted in the pelvis.

The mortality of this operation varies very greatly with the condition of the patient, depending chiefly on the exhaustion of the patient, whether or not the membranes have

been ruptured, and the number, extent and cleanliness of examinations, and other manipulations, which have been done in the vagina. Where conditions and surroundings are good, and the operator is competent to do abdominal surgery, the mortality is scarcely more than in normal labor, but where traumatism is present from attempts at other methods of delivery, and the patient is exhausted and infected, a mortality of twenty-five per cent is not surprising.

It behooves us, therefore, to examine all patients beforehand as to their pelvic capacity, unless they have already had normal labors, so that the best method can be determined on before labor sets in, and not have to wait and determine on one method of delivery because other methods have been tried and failed.

My experience with this operation in eclampsia and placenta previa has been nil, but I believe where the operator is at all competent and conditions and surroundings at all favorable, it will give the best results, as it is the quickest method of relieving these tense situations, and causes far less shock and traumatism on the mother than any other method of artificial delivery, besides giving the child the best possible chance for survival, which is a point that usually receives far too little consideration in these cases.

DISCUSSION ON DR. SMITH'S PAPER.

Dr. C. C. Harrold, Macon: There are two or three things I would like to refer to in connection with this paper. I was congratulated in Savannah last year by some one for reporting some of my failures. Dr. Smith is to be congratulated in the same way. The man who has a perforation and tears things all to pieces in removing the child and has a recovery should be congratulated.

I would like to know why he did not use Cesarean section in that case. I am afraid of high forceps. I think if we were to read Tristram Shandy and his experience with his nose we would be slower about the use of high forceps. I had an experience a few months ago in having given ether for another physician who was using high forceps. In that case he took about thirty minutes to apply the forceps to get the head engaged, and took about five minutes to deliver the child after they were applied. It taught me a lesson which has been hammered into me before, that we should always go slow after

once getting the forceps on. If we should do that, we would not have so many bad tears.

Lately I have had two cases where there was a question whether to use high forceps or to do Cesarean section. Both of these cases were eclamptic. One of them was in rotten shape, if I may use that expression, and the other in good condition. The one that was in rotten shape looked as if she could stand practically nothing. We did a Cesarean section and came out all right. When a Cesarean section is done upon a bad risk we should try to learn to do the operation quickly. It does not take long to do a Cesarean operation if you are prepared for it; you can get the child out in two minutes, and in this case the patient left the table in between fifteen and sixteen minutes. If you do not do any fancy work in getting out you can get out in a hurry. They stand it very well.

In the other case that was in good condition we decided to use high forceps. We got through and in about two hours the woman was slightly torn, and the child's head was pretty badly bruised on one side and one ala was torn. We did get out in both cases, but the more I see of high forceps the less I think of it.

Dr. Smith, in Closing: In answer to the question why a Cesarean section was not done in the first place, but the case ended in craniotomy, one of the principal reasons was these people wanted the child delivered by the natural method, and I found it exceedingly difficult to overcome the symptoms. The patient was having convulsions, and while I had sufficient instruments to do a Cesarean section, I only had one trained assistant and he had to give the anesthetic. I could not get the patient in a hospital with the conditions existing, and I thought under the circumstances forceps was the best thing to use. The more I see of high forceps, the better I think of Cesarean section.

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THE CLEANING UP OF TYPHOID FEVER IN BLACKSHEAR.*

W. P. Williams, M.D., Blackshear, Ga.

In 1907 I read a paper before this body on the report of fifty dwellings infected with typhoid fever. The conclusions reached were that human excrement is the source of typhoid infection; that the house fly is the carrier of it in the vast majority of cases; that the human host is necessary to preserve its virulence and vitality; that without fresh material it dies out automatically in a year, or probably in six months; that it is preserved in its dormant state, during the winter, upon the legs of the house fly, which itself remains dormant until the coming of spring or warm weather. Agents that will destroy the night-soil and inhibit the house fly, will solve the problem of typhoid fever. These principles applied resulted in destroying the disease in fifteen out of sixteen country homes, and twenty out of thirty-four town homes. These simple measures, so effective in isolated families, can be applied with equal success in communities. The mere multiplication of units does not affect the problem.

In the following record I hope to demonstrate that it is relatively as easy to stamp out typhoid fever in towns as in isolated country homes, whether the outbreak is in a family of five, a village of five hundred, a town of five thousand, or a city of five hundred thousand. It is practically the same thing. Recently a statement was made that owing to the sanitary perfection reached in London, typhoid fever had become so rare that it was difficult to find cases to demonstrate to medical students, and in that city with its millions of crowded humanity, that it would become as uncommon as typhus fever. I wish it to be understood that in the following records all continued types of fever are classified as typhoid fever, whether it continues ten days or ten weeks, where it could not be definitely diagnosed as some other disease, it is called typhoid; slow fever, continued fever, typho-malarial fever, paratyphoid fever, estivo-autumnal fever, are all included under typhoid fever.

Five years ago the chairman of the health committee of council prepared a scheme of instruction in the form of ordinances gov-

*Read at meeting of Medical Association of Georgia, Atlanta, Ga., 1914.

erning the care of typhoid fever cases and means for preventing its transmission to others, including the important part the house fly played in its dissemination. These ordinances were advertised and the public mind prepared for a concerted action against the disease. Up to this time perfunctory inspection had been carried on, usually commencing in the spring and ending with the autumn, with some ordinances as to the care of closets, etc.

Our first care was to secure some cheap and safe disinfectant that could be furnished abundantly by the town and applied freely and without cost, not only for use during sickness, but in the closets as well. In towns where there is no house drainage, and in all towns and cities where there is but partial house drainage, the privy vault can be looked upon for the main supply of the contagium, and the house fly the means for its transmission. My own observation is that the fly will not usually carry the disease over a hundred yards from its habitat, and its habitat is as apt to be the closet as the horse stable. Our object was to secure a preparation primarily to prevent the fly from visiting and breeding in the vault. It is known that there are certain odors singularly obnoxious to these insects, among them crude carbolic acid. I am well aware that this substance does not rank well as a powerful germicide, and as a disinfectant is less potential than some other substances. But as a repellant to this pest, it is a decided success. We have devised a formula of one pint of crude carbolic acid to a peck of unslacked lime (the lime seems to have the faculty of loosing these odors). It would doubtless be better if the rock lime were pulverized, but where this is impossible, the use of enough water to reduce the lime to powder will be necessary. An ordinance posted in the closet compelling the use of this powder when the closet is used, acts as a good reminder. Since the use of this preparation, I have seen no pupa of the fly in the vaults, and rarely a fly itself. It is also a most efficient deodorizer. At the close of our first year, ending with March 1, 1910, in which we were more diligent in inspection and the public better instructed in sanitary matters, a year in which we congratulated ourselves on being singularly free from the disease, and undoubtedly were, in comparison with previous years, though no record of cases were for-

merly kept, twenty-seven cases to our surprise were reported.

The next year we started with our disinfectants in March, and at the close of the year, March 1, 1911, but thirteen cases occurred, a gain of more than fifty per cent. The next year we carried our inspection and disinfection through winter and summer, with a result of nine cases, a gain of about thirty per cent. We continued this method up to March 1, 1913, with a report of seven cases, a gain of twenty-two per cent, and my report closes with our last year, ending March 1, 1914, with but four cases, a gain of forty-three per cent. I did hope I could present this body a record of a year of a Georgia town without a case of fever, but I shall have to be contented with the facts as they are. Strange to say, two of these cases occurred in the winter, so that during the months that the disease is usually prevalent we had but two cases. Three of the cases occurred near the location of cheap restaurants and boarding houses, the most constant focus of infection in the town.

Of the twenty cases occurring in the past three years but two were negroes. This year not one of that race had the disease. I find the negro in general more teachable and prone to follow instructions than the white man of better intelligence.

I have not seen a case of typhoid fever except in consultation, in over a year. I have attended as many as twenty-five cases in one season. There is not an experience in the twenty-five years of practice that gives me more satisfaction.

ATLANTA'S MEDICAL STUDENTS RANK HIGH.

Officers and faculty of the Atlanta Medical College were gratified to learn that of twenty-nine of its graduates who took the Florida State Medical Board examination at Palatka only one failed to pass. Of the ninety-six applicants who took the examination, graduates of different colleges, twenty-nine failed to pass the Florida board's quiz.

In the recent session of the Georgia Medical Board 100 of the Atlanta Medical College graduates, all that entered, passed, and all made a grade above 80. Dr. Albert McKenzie, of Palatka, Fla., took both the Florida and Georgia tests and passed with high honors in both.—Atlanta Georgian.

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ILLUSTRATIONS: Half-tones and zinc etchings will be furnished by THE JOURNAL when satisfactory photographs or drawings are supplied by the author. Each illustration, table, etc., should bear the author's name on the back. Photographs should be clear and distinct; drawings should be made in black ink on white paper. While we cannot guarantee to return used photographs and drawings, we use our best endeavors to do so after the article is published, if the word "return" is written on the back of each.

ANONYMOUS CONTRIBUTIONS, whether for publication, for information, or in the way of criticism, are consigned to the wastebasket unread.

NEWS: Our readers are requested to send us items of news of a medical nature, also marked copies of local newspapers containing matters of interest to physicians. We shall be glad to know the name of the sender in every instance.

ADVERTISING.

The Journal is owned and controlled by the Medical Association. It would be impossible to publish it without the income derived from advertisements.

This being the case, it is the duty of every member of the Association to patronize advertisers where other things are equal. It is also the duty of every member to scan the advertising pages and see what advertisers have to offer.

No advertiser will continue his patronage unless he gets results. He is helping you to support your Journal and naturally expects you to help him support his business.

We accept no advertisements until we investigate them and the Association guarantees all statements made by our advertisers, so you are protected. We do not wish to be considered as soliciting business for our advertisers, but we do feel that you owe the Association the courtesy of looking at the advertisements in your Journal. Some of them make propositions to you which are worthy of your consideration.

There has also been some criticism of the appearance of professional cards in the Journal. In adopting this course your Journal is only following in the footsteps of practically every other State Journal in the Union.

It is of benefit to both the advertiser and the general practitioner who often is requested by patients of his to suggest the name of some physician in a distant town to which place the patient may be moving. We know that it is not infrequent for patients of ours who may be changing their places of residence to other towns to ask us, "Who is a good baby doctor," or to whom they should go for advice concerning some malady. It is often very convenient to be able to refer to one's Journal to see who is engaged in such special work as may be desired.

Please note that these professional cards are limited to members only, and if there is any valid reason why they should not be run in your Journal, we are sure the Board of Councillors will order them discontinued.

Candy is an important factor in the diet of the soldier on account of the sugar it contains. The sugar gives strength to muscles and helps to produce fat; it delays fatigue, and increases working power. After much hard work, sugar quickly revives and restores jaded muscles.

Sudden anuria may be the first symptom of a carcinoma of the cervix in an apparently healthy woman.

Courvoiser's law is rarely broken—enlargement of the gall bladder with pronounced jaundice means neoplasm.

An advertisement in The Journal of the Medical Association of Georgia will bring results. Rates sent on request.

SURGEON GENERAL GORGAS AND THE NATION'S GREATEST NEED.

His work as chief sanitarian of the Canal Zone having been completed, Surgeon General Gorgas has returned to Washington to assume his duties as chief of the Medical Corps of the United States army, to which he was recently appointed by President Wilson. No conquering hero ever returned to his native country with a record of greater achievement and none ever deserved greater encomium for his services to mankind than Surgeon General Gorgas. The fame and vain conquests of Alexander the Great, Caesar and Napoleon, and other great conquerors in history, were accomplished at the cost of carrying death and desolation over continents, making millions mourn; while the victories of Surgeon General Gorgas, and those who followed him in the campaign against tropical diseases in the "death holes" of Panama, saved thousands of human lives, made a health paradise of tropical jungles, and, as President Taft said, "rendered possible the completion of the Panama Canal, the greatest industrial undertaking in the history of the world."

The greatest triumphs of medicine in the knowledge of men have been the elimination of yellow fever and the practical eradication of malaria from Havana and the Canal Zone, thus proving that those life-destroying and energy-sapping diseases, the most dreaded enemies to man in tropical and subtropical countries, can and will be conquered everywhere. These triumphs mean that millions will live in health, happiness and unbounded prosperity in regions that are now sparsely inhabited and undeveloped because of the presence of these tropical diseases. Nothing in history is more inspiring than Gorgas' conquest over disease, and the good that he has done will rest like a benediction upon the inhabitants of temperate and tropical countries throughout the world, when wars and warriors and "the fearful ruin they have wrought" have been forgotten. What a fine theme for the thunder roll of a Homer, this splendid genius of the American army, with his band of sanitarians, routing the hosts of Death in their tropical strongholds. It towers above the heroism of the lofty-plumed Hector or the valor of faithful Achilles.

That Surgeon General Gorgas' work is appreciated in foreign countries—as it is by his

own people—is shown by the tribute paid him by the Public Orator of Oxford University, England, who, last March, presented him for the honorary degree of Doctor of Science.

The Acting Vice Chancellor of Oxford in admitting Surgeon General Gorgas to the degree of Doctor of Science approached the epic in expression when he said:

"Pre-eminently distinguished, sagacious, health-bringing, the modern Machaon of the American army, whom indeed I should wish to salute not only in Latin prose, but also in Greek verse, thus;

"'Hail, Router of the Plague Flies! Hail, Isthmian conqueror true!
Gorgas, to that wise goddess dear, the Gorgon Death who slew.'"

Perhaps the highest compliment ever paid a sanitarian by a foreign country was when the English called upon Colonel Gorgas to investigate sanitary conditions in the Transvaal and in Rhodesia. His recommendations to the Transvaal Chamber of Mines for improving the sanitary conditions of the employes of the mines on the Rand, as published in the Journal of the American Medical Association, June 13, 1914, if carried out, as they were on the Canal Zone, will reduce the number of deaths from pneumonia alone by thousands each year, and his visit will thus prove a blessing to the inhabitants of South Africa.

It is estimated that several million people in the United States have malaria every year, and the annual economic loss is considered to be not less than \$100,000,000 from that disease. Yet if the same practical methods of malarial prevention, which were successfully carried out in Havana and the Canal Zone, were put into effect and continued for five years in our own country, malaria would become a rare disease in the United States.

The army and navy departments protect life and property in time of war. Is it not just as important to protect life and property during peace? The department of health should be on the same basis as the department of the army and navy. Indeed the medical corps of the army and navy should be correlated with the department of health during times of peace. It might be well to go further and train selected men in each regiment as sanitary inspectors to be used by the various cities and states, upon re-

quest, as in times of an epidemic. New Orleans is now spending \$50,000 per month in salaries for plague prevention, when the work could be better done at probably one-fifth the cost if the United States marines were trained in sanitary work and could be called upon for that service. Is not the protection of the health and lives of a people of equal importance as the safe-guarding of labor and commerce, and should there not be a department of health with a secretary of health?

The American Medical Association, the Southern Medical Association, and practically every state, county and city medical society in the entire United States have endorsed legislation for the creation of a department of public health with a cabinet officer at its head. Efforts were made to enact such legislation during the administration of President Roosevelt and Taft, and though success seemed assured, the bills were defeated. The next session of congress seems the most propitious time to present this most important measure to our national legislators. Never in the history of our country has so much advanced legislation for the good of the entire people been made into laws as in the past year; and the democratic party, under the leadership of the most accomplished statesman that ever occupied the presidential chair, will not fail in its opportunity to meet the nation's greatest need and create a department of health. During the interim of the sessions of congress physicians should make the opportunity to inform their friends among the congressmen and senators of the needs for such legislation. If the medical profession will stand united on this question there can be no doubt but that before another year congress will have enacted the greatest possible piece of constructive legislation for the good of the whole people by providing for an adequate department of health.

Great epochs develop great men to lead the great movements for the betterment of mankind. The present epoch in the world's achievements will go down in history as the dawn of the science of sanitation and in this movement our country leads all other nations, and she has produced the greatest leader. The United States government has sent through Surgeon General Gorgas the gospel of health and sanitation into Cuba, the Canal Zone and South Africa, and will she not call upon the genius she has devel-

oped to lead the fight against the hosts of death that have invaded our own country and that every year destroy more lives than have been lost in all the wars in our history.

Our government owes it to Gorgas to create a position of greater honors than has ever been filled by a sanitarian, or by any other member of the medical corps of the United States army. After Dewey's return from his victories in Manila Bay a grateful nation gave him such a greeting as has never been accorded any other man in our history, and congress voted to make him a full admiral, the highest position in the navy. Are not the achievements of Gorgas of greater service to our country and more far reaching in their effect in increasing national prosperity and happiness than any naval victory ever won? If so, congress should show the gratitude of the people whom it represents by first making Gorgas a major-general in the United States army that he may retire with that rank. Then it should perform the greatest possible service for the nation by creating a department of health, and the sincere desire to appoint the man who can give the best service in the position may be depended upon to lead President Wilson, who has proved his wisdom in every act of his administration, to select Gorgas as secretary of health in order that the nation's greatest need, as well as its greatest opportunity, may be fulfilled.—Southern Medical Journal.

THE DANGER OF INFECTION FROM ICE.

The modern practice of using iced food and drinks is so universal in this country that it is important to determine to what degree ice may be relied on as not carrying infection. When in the seventies and eighties of the last century it was shown that pathogenic bacteria might survive freezing, ice fell under suspicion as a possible medium for the transmission of disease; yet few epidemics have been ascribed to it, and the evidence concerning these has been regarded as inconclusive. H. S. Cumming in a recent article in the United States Public Health reports makes a study from the point of view of the source of ice, the physical and biologic changes accompanying or consequent on its formation, and the methods employed in its collection or manufacture and handling.

Ice is either natural or artificial. Until

recently, in order to secure clean, transparent artificial ice, it was necessary to distil the water used, thus destroying all disease-germs present. With the newer methods employed, filtration is held to be insufficient. Cumming remarks that the fact, well known to chemists, that during crystallization nearly all extraneous substances are expelled from the crystal, was overlooked by sanitarians until recently. As Whipple says, "Qualitatively the early bacteriologists were right; quantitatively they were wrong." In the formation of natural ice, most of the impurities are expelled into the waters of the pond or stream, and the same result is attained by the newer methods of artificial ice-making. By the "can" method, cans of water are immersed in the freezing mixture. As the freezing proceeds the impurities are forced toward the center. In one of the newer methods, large cans are used, and the cakes of ice are cut into smaller ones, eliminating the dirty core. By another new "can" method, the impurities are expelled into about six inches of water kept liquid by agitation. In the "plate" method, the water is contained in large tanks, on one side of which are pipes containing the freezing mixture. The water freezes next the pipes in plates about 11 inches thick, and the impurities are expelled into the water beyond.

Some natural ice is undoubtedly derived from polluted rivers or ponds. Three great factors tend to purify ice from polluted waters: The first, as just mentioned, is crystallization. The second is temperature—the fact that freezing destroys a large percentage of bacteria. The third and most important is time. The longer the time intervening between the infection of water and its use (as water or as ice), the slighter the chance of the survival of the germs. On this score, natural ice, which is collected and stored for several months before shipment, has the advantage over artificial ice, which is usually marketed soon after it is made. Owing to these three factors—crystallization, temperature, time—clear, clean ice is of itself as free from danger as could be wished. Artificial ice made from pure water in clean, sanitary factories may be regarded as safe; so also may natural ice cut from reasonably pure deep ponds or lakes and stored under sanitary conditions. Artificial ice made from polluted water in dirty, insanitary factories is unsafe; natural ice cut from shallow polluted ponds or from grossly polluted rivers

is also unsafe. Any dirty-appearing, cloudy ice may be infected as well as polluted; no such ice should be used in contact with food or drinks. Ice which is otherwise safe may become infected by improper handling—by being dragged across dirty streets or sidewalks, or distributed by unclean hands. This is the great source of danger. Summing up the situation, The Journal of the American Medical Association says that we may practically eliminate danger by avoiding the handling of ice with dirty hands, by washing the ice with pure water, and by using only clear ice.

ADVERTISING BUSINESS PURIFIES ITSELF.

The "Printers' Ink bill" for the regulation of advertising, prepared originally by the Printers' Ink Publishing Company, has now been passed by twenty states, eight of which (Ohio, Washington, Rhode Island, Minnesota, North Dakota, New Jersey, Nebraska and Louisiana) have adopted the model bill verbatim. In the other twelve, Connecticut, Indiana, Iowa, Maryland, Massachusetts, Michigan, New York, Oregon, Pennsylvania, South Dakota, Utah and Wisconsin) the model bill has been amended by the addition of the word "knowingly," or "willingly," which materially weakens the measure. The bill has been passed by the legislature but vetoed by the governor in Maine and Colorado, defeated by the legislature in Virginia, Missouri, California, Kansas and Illinois, and unfavorably reported by the committee in South Carolina. This bill was endorsed by the House of Delegates of the American Medical Association in Minneapolis in 1913. It is short but effective, providing that any person or organization making any false statement in advertising any goods for sale shall be guilty of a misdemeanor. A bill similar in intent but different in phraseology has been introduced into the House of Representatives by Mr. Kreider of Pennsylvania. This bill, known as H. R. 11016, makes it a misdemeanor for any person or organization to knowingly make or disseminate any statement concerning the quantity, quality, value, merit, use, present or former price, purpose or motive of a sale of any security, merchandise, articles, commodity or services, or concerning the method or cost of production or manufacture of such articles or the manner

or source of purchase of such articles that enter into interstate or foreign commerce which is untrue or calculated to mislead. Mr. Kreider's bill also includes the weakening word, "knowingly," presence of which makes it necessary to prove actual knowledge on the part of the advertiser in order to secure conviction. The adoption of the Printer's Ink bill or its equivalent by congress and by all of our state legislatures will mean a new era of business honesty. The Journal is primarily interested in securing honest methods and products in its own peculiar field, namely, that of medicinal preparations offered for sale either to the medical profession or to the public. Honesty in business, however, is not readily divisible into classes. The leaven of sincerity must permeate the entire mass. The most far-sighted and progressive business men have recognized that honesty and truthfulness are indispensable assets for the successful conduct of any business. The strongest force for the purification of advertising today is the growing determination on the part of advertising men themselves to put an end to the deception and fraud which have so long characterized some phases of this business.

—Journal A. M. A.

MILLEDGEVILLE MAN IS TO BE DRUG INSPECTOR.

George D. Case, for the past forty years a prominent druggist of Milledgeville, was nominated by the State Board of Pharmacy for state drug inspector, to succeed Dr. T. A. Cheatham, who has held the office six years.

The state board, presided over by Chairman Sam E. Bayne, of Macon, met at the Hotel Hempsey and considered the applications of Dr. Cheatham of Macon, the incumbent; N. I. Brunner, of the Brunner Drug Co., Macon, and John T. Wages of Winder.

The law in the case is that the state commissioner of agriculture shall officially appoint the state drug inspector, but the board of pharmacy first makes the recommendation.—Macon Telegraph.

Work on the new sanitarium that Drs. Dismuke and Willis are erecting, is well under way, and in a short time its bulk will be seen looming against the skyline on Western Heights.—Ocilla Star.

AMERICAN PROCTOLOGIC SOCIETY.

Sixteenth Annual Meeting, Held at Atlantic City, N. J., June 22 and 23, 1914.

Officers elected for the ensuing year:

President—Louis J. Krouse, M.D., Cincinnati, Ohio.

Vice-President—Collier F. Martin, M.D., Philadelphia, Pa.

Secretary-Treasurer—Alfred J. Zobel, M.D., San Francisco, Cal.

Executive Council: James A. MacMillan, M.D., Detroit, Mich., Chairman; Louis J. Krouse, M.D., Cincinnati, Ohio; Lewis H. Adler, Jr., M.D., Philadelphia, Pa.; Alfred J. Zobel, M.D., San Francisco, Cal.

The place of meeting for 1915 will be San Francisco, Cal. Exact date and headquarters will be announced later.

The following is an abstract of the principal papers read:

EXTRACTS FROM THE REPORT ON PROCTOLOGIC LITERATURE FROM MARCH, 1913, TO MARCH, 1914.

Samuel T. Earle, M.D., Baltimore, Md.

In Samuel T. Earle's review of Proctologic Literature from March, 1913, to March, 1914, he quotes from the following authors, giving the salient points from each of their papers:

Percival P. Cole, M.B., Ch.B., F.R.C.S., England (British Medical Journal, Vol. I, 1913, page 431) "The Intramural Spread of Rectal Carcinoma."

Robert A. Bachman, M.D., Newport, R.I., Surgeon U. S. Navy. (Journal of American Medical Association, Vol. L, 1913, page 1154) "A New Method for Hemorrhoids."

Jerome M. Lynch, M.D., New York City. (The American Journal of Obstetrics and Diseases of Children, February, 1914, page 322) "Blocking the Sympathetic by a Method other than Spinal Anesthesia to prevent shock in the combined operation for Cancer of the Rectum, or Recto-Sigmoidal Junction, with some improvements and modifications of technic."

Charles R. Robins, M.D., Richmond, Va. (The Old Dominion Journal of Medicine and Surgery, May, 1913, Vol. XVI, page 236) "Sliding the Rectum in the Cure of Various Defects."

Granville S. Hanes, M.D., Louisville, Ky. (Kentucky Medical Journal, Vol. XI, June

15, 1913, page 516) "Anal Puritus Treated by Operation; Report of Case."

Frederick H. Williams, M.D., Boston, Mass. (New York Medical Journal, Vol. XCVII, 1913, page 875) "Electricity in Rectal Diseases. A Neglected Resource in Their Treatment."

T. F. Riggs, M.D., Pierre, S. D. (The St. Paul Medical Journal, Vol. XV, page 461) "Fistula-in-Ano: Its Rational and Successful Treatment."

P. Lockhart Mummery, F.R.C.S., England. (The Lancet, Vol. II, 1913, page 72) "Operation and After-Treatment of Fistula-in-Ano."

Harvey B. Stone, M.D., Baltimore, Md. (Annals of Surgery, Vol. LVIII, 1913, page 647) "Immediate and Late Results of the Whitehead Operation for Hemorrhoids."

Daniel Fisk Jones, M.D., Boston, Mass. (Boston Medical and Surgical Journal, Vol. CLXIX, page 707) "Carcinoma of the Rectum."

James W. Heslop, M.B., M.R.C.S., Newcastle-on-Tyne, England. (The British Medical Journal, February 28, 1914, page 476) "Dissemination in Carcinoma of the Rectum."

COCCYODYNIA: A NEW METHOD OF TREATMENT BY INJECTIONS OF ALCOHOL.

Frank C. Yeomans, A.B., M.D.,
New York City.

The diagnosis is established by a thorough examination, both general and local. Local examination is made by inserting the index finger into the rectum and palpating the coccyx between it and the thumb outside. The soft parts intervening between the coccyx and anus are now compressed and the point of maximum tenderness is thus located, usually just beyond the tip of the coccyx. Proctoscopy rules out rectitis.

The prognosis hitherto has been better in the traumatic cases than in those of frank neuralgia or neuritis. The writer confidently predicts that the treatment proposed will render the latter equally amenable to treatment.

The writer proposes a treatment based on the suggestion of Schlosser in 1907, of injecting 70 to 80 per cent alcohol in sensory nerves, thereby causing their degeneration as practiced with marked success in trifacial neuralgia.

The technique is simple and can be carried out in the office under strict aseptic precautions. The patient with empty bowel is placed on a table in the Sims' position and the skin about the coccyx painted with tincture of iodine. A 2 cc. Luer or similar syringe is filled with 80 per cent alcohol and armed with a two-inch needle. The right index finger is now inserted into the rectum and the point of maximum tenderness is determined by counter pressure with the thumb outside. Maintaining the finger in the rectum to guard against puncture and as a guide, the needle is introduced through the mid-line directly to the painful spot, and 10 to 20 minims of solution are injected slowly.

The needle is withdrawn and its puncture sealed with collodion. The pain from the injection lasts a few minutes and is followed by a dull ache which may last a day or two. From three to five injections are usually required at intervals of about one week.

The writer reports seven cases, all women, treated from two months to four years ago. They required three, four or five injections each at intervals of about one week. Relief was prompt and complete, and all the patients have remained well.

THE TECHNIQUE OF THE PERINEAL OPERATION FOR CANCER OF THE RECTUM.

J. A. MacMillan, M.D., Detroit, Mich.

In every case a preliminary colostomy must be considered imperative. The colostomy provides the only means of discovering whether a radical operation is justifiable or not, supplies physiologic rest for the affected part, and later provides for aseptic conditions in the surgical field.

After thorough divulsion a circular incision is made at the mucocutaneous line and carried up to the lower surface of the Levator Ani. Most of the dissection can be done by the fingers. It is not necessary to destroy the external sphincter. This step of the operation exposes a circular area of the Levator Ani about an inch and one-half wide. Before proceeding further the hemorrhage should be controlled and the location of affected glands determined.

The next step of the operation includes the division of the Levator Ani and the removal of lymphatic glands.

The peritoneum may be entered anteriorly

and separated laterally, which will leave the mesosigmoid as the only attachment of the bowel. This should be divided as far from its colonic attachment as possible in order to secure the retention of a good vascular supply for the proximal end of the bowel after the excision.

When the gut can be drawn down sufficiently to permit the excision of the affected portion and the attachment of the lower edge of the mucous membrane to the skin, excision is done and the sutures placed. Free drainage is necessary.

The colostomy is not closed until the patient has been up and about for several weeks.

MYASTHENIA GASTRO-INTESTINALIS.

V. Lee Fitzgerald, M.D., Providence, R. I.

By the term "myasthenia gastro-intestinalis" is understood a weakness of the muscles of the abdomen, stomach, intestines, and their supporting ligaments, with a consequent downward displacement of any or all of the viscera.

Many patients suffering from myasthenia in its different forms are in danger of having suspensory or other operations performed upon them, whereas the intestinal stasis can be entirely removed by medical measures and the baneful effects of the underlying ptosis entirely removed.

The general aim in the treatment is the relief of the stasis, and the restoration of the prolapsed viscera to as near their normal position as possible.

The success in the treatment of these patients depends not only upon the relief of stasis, but also upon the patient's active and persistent co-operation.

For the past two years the writer has been treating cases of myasthenia as follows: The patient is given a thorough examination, including that of the gastric contents, urine, and feces. In case of myasthenia of the stomach with dilatation and prolapse the patient is put to bed and fed through a duodenal tube six or seven times a day, depending upon the amount of food needed to nourish the patient. This gives the stomach a complete rest, and it comes up into normal, or nearly normal, position in from ten days to two weeks.

FURTHER OBSERVATIONS ON PRURITUS ANNI: ITS PROBABLE ETIOLOGICAL FACTOR; RESULTS OF TREATMENT.

(A Fourth Report, Based on Results of Original Research.)

Dwight H. Murray, M.D., Suracuse, N. Y.

In this report on the fourth year's work of original research on pruritus ani, the author finds there is not much more to give to the profession beyond the confirmation of the work of previous years. He has yet no reason to doubt his claims for the infection theory of pruritus ani.

Twenty new cases have been examined during the past year. In all but two of these streptococcus fecalis has been demonstrated.

It has been found that occasionally the bacterial growth seems to be so lacking in strength that it is difficult to obtain an autogenous vaccine. It is not known why this is so unless it is owing to the very low grade inflammation produced by germs not so active as those found in many other infections.

During this year two cases were treated by other physicians who tried to follow his technique, but in neither case was improvement manifest notwithstanding that streptococci were found present by the author's bacteriologist and although the same quality of vaccines were used. With the consent of their physician the author took up the treatment. Improvement was marked. The only point of difference in the technique that he could discover was that the others injected the vaccine deep into the muscle instead of directly into the skin or immediately beneath it.

During the past year the author has had additional proof that the itching does not extend appreciably above the white line of Hilton. He has also had continued confirmation of his previous statement that the moisture found upon the parts is not a discharge from the rectum.

This past year's work again shows that other rectal diseases are not present regularly with pruritus ani, and the belief is confirmed that they are coincidental instead of etiological.

No unfavorable sequelae arose from the vaccine injections. There is now no hesitation in running the dose up to two billion

or more dead bacteria. One injection resulted in formation of a jelly-like material in the tissue, but this was absorbed. Some time ago a similar swelling was opened and found to be sterile, and no trouble has resulted.

THE PATHOLOGIC SIGMOID COLON AND ITS SURGERY.

L. J. Hirschman, M.D., Detroit, Mich.

Studies with the fluoroscope and the sigmoidoscope have shown that true prolapse and invagination of the sigmoid colon into the rectum is not an uncommon condition. The author advocates shortening the mesentery of the sigmoid by attaching the mesentery of the invaginated or prolapsed portion to the root of the mesentery of the descending colon.

In a number of cases of obstruction to normal defecation, this obstruction will be found in women who give a history of a disturbed puerperium. Radiographic studies of these patients who give a history of chronic obstipation accompanied by pain and marked tenderness in the left lower abdominal quadrant and the region of the womb and broad ligaments, more often the left, show the presence of adhesions which angulate, displace or bind down the sigmoid. The cure of this condition involves the relieving of the adhesions and the covering of raw areas with omental, epiploic or mesenteric grafts, or the excision or short-circuiting of the sigmoid. Another class of adhesions of the sigmoid seriously obstructing defecation is caused by adhesion to the abdominal wound following laparotomy.

Hypertrophy or redundancy of the sigmoid colon is another pathological condition which has not infrequently been met with. When the walls of the bowel contain a large proportion of unyielding fibrous tissue, short-circuiting is insufficient and excision is insufficient, and excision is indicated.

In malignant growths of the sigmoid colon, excision with immediate anastomosis is the ideal indication.

When inoperable it is the author's practice to always make the colostomy in the median line. This is done for the following reasons: First, the median incision is the best for exploratory purposes. Second, one has the choice of any part of the colon in the making of the colostomy. Third, one gets just as good

adhesion and union, with no more liability to hernia, as in the side. Fourth, the patient is better able to cleanse and dress the colostomy in the median line. Fifth, it takes the colostomy opening away from the neighborhood of the iliac crests, and allows of the better fitting of retention apparatus and colostomy shields. Sixth, control of a median colostomy is just as satisfactory as the lateral.

The author has found no difficulty in securing colostomy control by using a small rubber catheter in the mesenteric opening beneath the spur and encircling the upper limb of the colostomy with this catheter, drawing it just snug enough that the mucous surfaces appose. The catheter is held in this position by a seraphine snap and is released by the patient when he wishes to defecate or expel flatus.

MYXORRHEA COLI-MYXORRHEA MEMBRANACEA AND M. COLICA. (MEMBRANEUS ENTERITIS — MUCOUS COLIC.)

S. G. Grant, M.D., New York City.

The essayist explained that myxorrhoea coli was a symptom complex characterized by constipation, abdominal pain, uneasiness or soreness, and the periodic evacuation of jelly-like strips or casts of tenacious mucus on the one hand or colic on the other, and suggested that all mucous discharges be designated as Myxorrhoea Coli, with which understanding the former is called Myxorrhoea Membranacea and the latter M. Colica. The writer conceded that either type of myxorrhoea coli may be secondary to neurogenic disturbances, but strongly maintained that M. membranacea and M. colica are frequently produced by many other conditions and diseases, medical and surgical, several of which may be factors in the same case. He had often known these conditions to be caused by psychic, neurogenic, gastrogenic and enterogenic disturbances, adenoidism, thyroid disease, impaired metabolism, abnormal menstruation, affections of the heart, liver and pancreas, inflammatory and ulcerative lesions (colitis), helminths, foreign bodies, prolonged or irritating colonoclisis, various lesions which induce chronic intestinal obstruction and led to coprostasis and autointoxication and other ailments which cause the hypersecretion or retention of

mucus. The writer had observed patients who suffered at first from myxorrhoea membranacea and later *M. colica* where the mucus became inspissated, irritating, and excited enterospasm.

The writer maintained that the diagnosis was easy in uncomplicated cases and that Myxorrhoea Membranacea could be recognized by its symptom complex, obstinate constipation, uneasiness and soreness or pain in the lower left abdominal quadrant and the periodic discharge of strips, casts, or jelly-like masses of mucus, and that where subsequent to these manifestations and in the absence of signs pointing to intestinal obstruction from other causes colic suddenly supervenes, one is justified in making a diagnosis of myxorrhoea colica.

The essayist discountenanced a routine treatment in these cases and advised holding curative measures in the abeyance until the acute symptoms subsided.

The removal of correction of kinks, twists, strictures, invaginations, adhesions, pericolic membranes and other lesions obstructing the bowel or causing stasis, effected a cure in many of the writer's cases and he rarely found the bowel sufficiently incapacitated to require resection, exclusion, or the establishment of an artificial anus.

In conclusion the writer stated that myxorrhoea membranacea and *M. colica* were common affections and more frequently responded to surgical treatment than the literature of the subject would indicate.

PERI-RECTAL GUMMA: REPORT OF TWO CASES.

Alois B. Graham, M.D., Indianapolis, Ind.

The subject peri rectal gumma over a great deal of its interest to its rarity. The author reports two cases which are rather unique. They were seen within twenty-four hours of each other, and both presented a typical peri rectal gumma, in that no lesion of any kind could be detected in the rectum of either patient.

The author's conclusions are that peri rectal gummata are rare. The two cases reported are unique and of interest in that both were typical examples of peri rectal gummata. In both cases the gumma was seen in its early or vascular phase. In one case it appeared twenty-three years after the initial lesion; in the other case it appeared three years following the syphilitic infec-

tion. Both gummata were painless to palpation and fluctuation was detected in both. An error of diagnosis in one case was responsible for the incision and subsequent supuration which followed. In the other case no incision was made and suppuration did not occur. No demonstrable rectal lesion could be discovered in either case. The induration in both cases disappeared rapidly under anti-syphilitic medication. No fistula resulted in either case.

TREATMENT OF AMEBIC DYSENTERY BY EMETINE HYDROCHLORIDE.

Alfred J. Zobel, M.D., San Francisco, Cal.

The writer gives a brief culling from the literature on the emetine treatment of amebic dysentery, and also a few words relative to the drug itself.

He states that in emetine hydrochloride we have a reliable, non-toxic drug possessing a definite specific action, which may be administered hypodermically, and yet which will permit of a sufficient dose being given without causing any depression, nausea, vomiting, or local reaction.

He reports two interesting cases in which the disease was present in one individual for ten, and in the other for fourteen years. Under the influence of emetine, within two or three days amebae, blood, mucous, froth, and foul odor disappeared from the dejections and their number greatly decreased; the racking tenesmus, bearing down feeling in the rectum, the colic, and the abdominal tension, discomfort, and gurgling absolutely ceased.

Proctoscopic examinations revealed the favorable influence of the drug upon the amebic ulcerations. No amebicidal irrigations were employed.

He further reports other cases seen by him in consultation which demonstrate most forcibly the necessity for a proctoscopic examination of the bowel and a microscopic examination of the feces in every instance where a diarrhoea lasts longer than a week, even though the patient has never lived in nor visited a locality where the disease is known to exist.

He advises that emetine should be given for at least three or four months at intervals before the patient should be considered free from the possibility of a recurrence, even though he is clinically cured and the amebae cannot be longer found in the stools.

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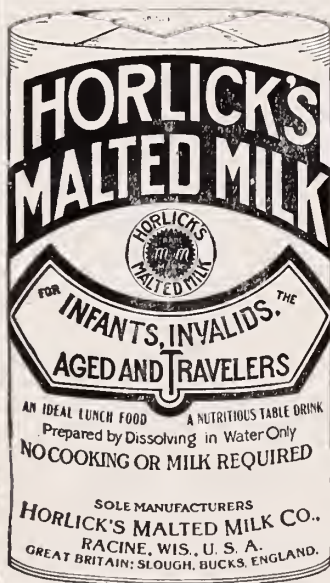


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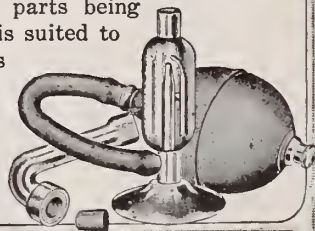
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AN EXPERIMENTAL STUDY OF THE ABDERHALDEN TEST.*

Allen H. Bunce, M.D., Atlanta, Ga.

It has long been known that the injection of foreign protein into the system produces certain biologic changes in the blood which render it capable of destroying such foreign material. However, it was not until the discovery by Schmorl and Veit of syncytial cells and portions of the chorionic villi in the circulating blood of animals that this fact was made use of in diagnosis. Abderhalden, making use of this fact, originated a biologic test for the pregnancy which depends upon the production of a ferment or enzyme in the blood of pregnant animals produced as a result of having these small particles of the chorionic villi discharged into the blood current. He further observed that these ferments are specific and are never found in the blood of normal animals. Undoubtedly the blood of these pregnant animals acquired this ferment on account of the reaction produced by these particles of protein discharged into the maternal circulation.

The observations of Abderhalden have been confirmed and extended by a number of ob-

servers. This test has been applied to the diagnosis of pregnancy, cancer, syphilis, exophthalmic goiter, and to dementia precox. These various tests have been reported fully in the current literature. In each test the underlying principle is the same, only a different albumin is used. In the test for pregnancy, the albumin is from the placenta; in the test for cancer the albumin is from a carcinoma of the breast; in the test for syphilis the albumin is from a gumma of the testicle of a rabbit which has been inoculated with spirochaetae; in exophthalmic goiter it is from an exophthalmic goiter; in dementia precox, the albumin is from testicular or ovarian tissue. In my work I have used only the tests for pregnancy and cancer, hence I will confine myself to these in my description of the reaction.

Abderhalden describes two methods of detecting the presence of these ferments in the blood, the optic and the dialyzation methods. I have made use only of the dialyzation method, which is as follows:

1. Preparation of Placental Albrmin or Cancer Albumin.

The placenta of a normal pregnancy is obtained immediately after delivery and is once washed thoroughly in running tap water so as to wash out all blood clots, etc.,

*Read at meeting of Medical Association of Georgia, Atlanta, Ga., 1914.

until the tissue presents a whitish spongy appearance. The membranes are all trimmed away thoroughly so that only true placental tissue is left, after which the tissue is cut into small bits and thrown into a large quantity of boiling water which has been previously acidulated with a small quantity of acetic acid. This is then boiled for fifteen minutes. Then the water is poured off and the tissue is again boiled in a second portion of acidulated water for five to fifteen minutes. This water is then tested by the triketohydrindenhydrat reaction for the presence of peptones or amino-acids. If a positive reaction is obtained it must be again boiled because it is very essential that only albumin is left, since to do so would spoil the test later on. However, if a negative reaction is obtained further boiling is unnecessary. The tissue is now placed in a flask and covered with distilled water to which a small quantity of chloroform has been added as a preservative and is overlaid with toluol as a further protection against contamination. The placental albumin is now ready for use and the particles of tissue can be removed when needed for the tests.

Cancer albumin is prepared in the same manner.

2. Obtaining the Serum.

The blood for the test is obtained under aseptic precautions from one of the veins of the forearm and placed in sterile centrifuge tubes so that a perfectly clear serum can be much more readily obtained. From 10 to 20 c.c. of blood should be drawn so as to have enough serum for all the tubes for the test and for control tubes. The blood should be obtained as far as possible from a meal, since while digestion is going on the blood contains certain amino-acids which may give a positive reaction. Personally I find it most convenient to obtain the blood in the morning before breakfast. Another precaution which must be observed is to avoid shaking the tubes containing the blood or disturbing them in any way that will cause the serum to be tinged with haemoglobin, since this will also interfere with the test.

3. Selecting the Dialyzing Shells.

Abderhalden recommends, and all those doing the test, use diffusion shells No. 579 of Schleicher and Schull. However, not all of these are suitable for the test and each must be tested separately for its impermeability to

albumin and its permeability to peptones. The shells are first soaked in water and then boiled for a few minutes, after which they are rinsed in distilled water. Then 5 c.c. of hemoglobin-free serum is placed in each shell, being careful that none of it gets on the outside. These are then placed in the dialyzing cylinders which have been previously sterilized and plugged with cotton and which contain 20 c.c. of sterile distilled water. A few drops of toluol are placed in the shell and in the cylinder around the shell and the whole is then placed in the incubator and kept at 37° C. for eighteen to twenty-four hours. At the end of this time 10 c.c. of the dialysate is removed with a pipette, dipping beneath the layer of toluol, and placed in a large test tube; 2 of a c.c. of 1% solution of triketohydrindenhydrat (or ninhydrin) is added and the contents boiled for one minute. If the dialysate remains unchanged it will show that the shell has allowed no albumin to pass through and is acceptable from that standpoint. It is next tested for its permeability to peptone by placing a solution of silk peptone in the shell and proceeding exactly as before. The dialysate is then tested with the ninhydrin reaction. Those which are found to be perfect are placed in water and overlaid with toluol until needed in performing the reaction.

4. Technique of Performing the Test.

After the above preliminary work is done, the following is the technique of performing the reaction: A few pieces of the placental albumin are removed from the flask and ground up finely in a mortar. Then several portions of 2 grams each are weighed out. Into shell No. 1 are placed 2 grams of placental albumin and 2 c.c. of normal salt solution. The shell is then rinsed thoroughly on the outside with distilled water and placed in the cylinder, prepared as described above, containing 20 c.c. of distilled water. Into shell No. 2 are placed 2 grams of the albumin and 2 c.c. of known negative serum; into shell No. 3 are placed 2 grams of albumin and 2 c.c. of a known positive serum; into shell No. 4 are placed in addition to the albumin 2 c.c. of the suspected serum; and finally into shell No. 5 are placed 2 c.c. of the suspected serum alone to see that it contains no dialyzable products which may give a positive reaction with the ninhydrin. These are all then placed in the incubator for eighteen to twenty-four hours after overlay-

ing the contents of the diffusion shells and the cylinders with toluol.

At the end of this time the cylinders are removed and the dialysate tested as described above for the presence of a dialyzable protein. Tube No. 1 should be clear; tube No. 2 should be clear or at most show only a slight yellowish color, since it contains the known negative serum; tube No. 3 should show a reddish or bluish purple color, since it contains the serum from a known positive case; tube No. 4 should remain clear if the suspected serum be negative and should show a purplish color if the serum be positive; finally tube No. 5 should also remain clear because no albumin was added to this tube.

In my work I have completed thirty-four tests for pregnancy, sixteen of which were positive and seventeen of which were negative. In no case have I obtained, **so far as I know to date**, a negative reaction in a proven pregnancy. However, I did at first obtain several positive reactions in cases where pregnancy was known not to exist, but my results here were due to faulty technique, such as obtaining the serum from patients soon after meals when there were present amino-acids in the blood which are known to give a positive reaction to the ninhydrin test. In my last thirty cases I have not had this error to occur, since I have found that if any reliance is to be placed in the tests an absolute adherence to the technique must be observed in every case. Every detail of the technique must be observed in every case to get accurate results. A number of my cases were known clinically negative and positive cases, while others were of a doubtful nature and the test has served to clear the diagnosis.

My cancer albumin was prepared from a carcinoma of the breast in the same manner in which the placental albumin was prepared. So far, my tests on cancer have only included known positive and known negative cases, but from the results to date, I believe we have here a very valuable aid to substantiate and strengthen our clinical diagnosis in doubtful cases.

Regarding the present status of this test, I quote the following from a recent editorial in the Journal of the A. M. A.:

"Most of the authors cited have obtained positive results in practically all cases of pregnancy. On the other hand, less favorable results are reported by Engelhorn, Behne, and by Williams and Pearce, who as-

sert that they have obtained positive results in other conditions than pregnancy. They conclude, therefore, that the test cannot be accepted as an accurate clinical method until it has been more thoroughly investigated and the possible sources of error corrected. It is interesting to note that Schlimpert and Hendry, who tested in all 316 cases, found at least eight or ten different errors in their earlier work which interfered with accuracy. These, as well as many others, including Abderhalden himself, emphasize the great importance of an exact technique. After numerous trials Schlimpert and Hendry obtained positive results in all of their last seventy-nine cases of pregnancy.

"Lindig and later King have prepared dried extracts of placenta in sealed tubes which they believe are an improvement on Abderhalden's method of preparing and keeping the placental tissue, but Abderhalden holds that Lindig's preparation of dried placenta are untrustworthy and that all his powders, after a few months, will give a positive ninhydrin test."

"We must conclude then that so far as pregnancy is concerned we have here a method of diagnosis of practical value and wide application. The results at hand show that the ferment is present in the blood from the sixth week after the last menstruation until the end of the third week post partum. Experiments on animals have shown that the reaction may be obtained within twenty-four hours after implantation of an ovum. The ferment is present also in cases of extra-uterine pregnancy."

In regard to this last statement about using the dried placental albumin, I have used in all my tests a preparation of desiccated placenta kindly furnished me by Parke, Davis & Co., alongside of my own placental albumin prepared as described above. My results with the dried or desiccated placental albumin have convinced me that it is inferior to placental albumin prepared from the fresh placenta. The fault which I have found with it is the same as that described by Abderhalden, viz., that it often gives a positive ninhydrin reaction, especially after it has stood for a time.

DISCUSSION OF DR. BUNCE'S PAPER.

Dr. W. J. Cranston, Milledgeville: I noticed that Dr. Bunce referred to the negative findings of Williams and Pearce.

Schwartz, of St. Louis, has written four very excellent articles on Abderhalden's work during the last eighteen months, and criticizes the work of Pearce and Williams of Philadelphia, pointing out that their failure to get a correct diagnosis is not due to the Abderhalden reaction, but to faulty technique.

WHITMAN'S METHOD OF TREATMENT OF FRACTURED HIP.*

Charles C. Harrold, M.D., Macon, Ga.

The essayist has neither the ability nor the intention to tell anything new and original to this body about the treatment of fracture of the hip. It is, however, his intention to try and convince some of the society who are not using Whitman's method that it is the one method which attempts to treat fracture of the hip in the same reasonable and sensible way that all other fractures of the long bones are treated.

As third year medical students we were all taught in our first general lecture on fractures that treatment consisted in reduction and then immobilization or retention. Then a few weeks later when we were lectured to on fracture of the hip it should have been, if it was not, a decided shock to our sense of consistency when we heard how it was to be treated. I say "was to be treated." I might say still is treated, for there are still here in the South a great many men who do first class work in other surgical lines, who still treat fractured hips as they did twenty or thirty years ago. I allude to the Bucks extension method.

Before describing the Whitman method (the ideal method, as it is called by Seudder), let us for a few minutes review the literature of the past few years and see what the best fracture men of the country have to say about the results as obtained by the old method. I know that there are a number of men in our part of the world who say they get good results with it. Yet the following observations are by such men as Sudder at the Massachusetts General, and Ashurst in Philadelphia, and Stimson in New York. Stimson, by the way, is the only one of the high class fracture men I know of who is not at present time entirely won over to the Whitman method.

Turning our attention then first to

Criticisms of the Old Buck Extension Method.

Stimson, in studying results, says, "Union takes place almost invariably with some deformity and some limitation of motion at the hip; the limb is shortened and everted, and there is diminished abduction by the change in the angle of the neck with the shaft. The shortening may be slight, but it causes more limp than same amount of shortening in the shaft on account of limitation of abduction." Notice here the great importance that Stimson pays to the limitation of abduction after union. Here, of course, he is discussing those cases where union takes place under Bucks, which is, I think, generally in the impacted cases where not enough weight is put on the bucks to break up the impaction.

Ashurst in Philadelphia reports fifty-eight cases treated with sixteen deaths by old method. He traced twenty-one cases and found in these only five cases with no limp following, and of these five, two were in children. Eight had limp with no disability, six were badly impaired, and two incapacitated.

Seudder, who is, I think, one of the best fracture men in the country, reports a careful study of sixteen cases which he made. In all of these cases examination was made after two and a half years. Out of sixteen cases he says: "Thirteen out of the sixteen cases have impairment of the functional usefulness of the leg, a weakness requiring a crutch in many instances; all movements of the hip somewhat restricted; atrophy of the thigh and leg muscles; a decided limp; pain on extending hip, etc. In only two cases out of the sixteen could it be said that the leg was functionally useful." He concludes his discussion with the statement, "The conclusion is evident that the old time method of treatment is not productive of satisfactory results."

Let us now for a few moments, before studying the Whitman method itself, see some of the reports of men who have used it.

Whitman himself has in the past ten years showed case after case at the New York Surgical Society of all ages, from youth to old age, with absolutely no shortening, no limp, and no limitation of abduction. All of us who know him know him to be a man of extreme egotism and so full of scathing sarcasm that he is far from popular among his associates; so much so that a suggestion coming from him is apt to be received with great disfavor. As a result, New York has been,

*Read at meeting of Medical Association of Georgia, Atlanta, Ga., 1911.

I think, slower than usual to take up a good thing. I understand now, however, that with the exception of Stimson, practically every fracture man in New York is using the method. I know that it is used by all the men at the Ruptured and Crippled, by all the men at Bellevue, at Presbyterian, and at Roosevelt. The last time I saw Whitman he told me that he had the day before put up an old lady, age 91. He beat me eight years, as my oldest up to date is 83. Eisendrath of Chicago, in the last volume of Keen, mentions the fact that the profession at large is using the method more and more.

Ashurst in Philadelphia says as follows:

First. In children success will almost invariably be achieved by this method.

Second. In otherwise healthy individuals, says up to 55 years, treatment by longitudinal traction alone (that is, Buesk alone) will not infrequently result in loose and disabling non-union, often with severe pain for a year and a half or longer.

Third. Treatment of the same class of cases by Whitman's method will usually result in sufficient fixation to give a useful and serviceable limb.

Fourth. In cases of non-union from any cause the surest way to get union is to cut down on the fracture, freshen the edges and fasten with a nail, plate, or screw, and put in abduction.

Fifth. In cases of non-union, whether for any reason operation is inadvisable, much relief can be obtained by fixing limb in wide abduction in plaster paris. See reports below.

Means of Applying Method.

Let us now see of just what this method of Whitman's consists and how it is applied.

Whitman insists that the old ideas of treatment of leaving the displaced fragments alone are all wrong. He says that if the bone is given a decent chance it will unite if it is broken at the neck just as well as if it is broken in the middle of the shaft. His one idea is to treat fracture of the neck of the femur just as you would fracture anywhere else in any long bone. That is, to first reduce your deformity, approximate your fragments and mobilize. He says that Stimson is wrong when he believes that "The ideal object of treatment, restoration of form and function is rarely to be expected or even sought." Whitman then strives to completely restore the function, not being content with anything else.

The means of doing this are as follows:

First the patient is anaesthetized (unless strong contraindication), placed on a table with the hips and pelvis supported at edge or end of same on a pelvic support. The sound limb is carefully abducted by an assistant to normal limit which is about 45 degrees. At this point the neck of the femur comes in contact with the rim of the acetabulum preventing further abduction. The soft parts between the great trochanter and the pelvis may stop it a little before this even. The thigh of the injured side is then slightly flexed to break loose any fragments from the capsule. Traction is now put on the limb by an assistant while the operator exerts slight downward pressure on the great trochanter until the two limbs are the same in length. The fractured limb is now abducted to its full normal limit, same being judged by comparing with the normal limb. In this attitude the limb is carefully covered by cotton flannel bandages and a plaster spica applied from the toe well up on the trunk. This is to be left on for eight weeks, and after removal the patient must not expect firm union until six months after first put up.

Whitman claims for this method, and I think rightly claims, that we have no method of controlling the inner fragment and that the only way we can approximate the two fragments is to adapt the outer fragment to it. He claims that:

First. Abduction turns the fractured surface of the neck downward to meet that of the head.

Second. Abduction makes the capsule tense and aligns the fragments.

Third. Abduction relaxes the muscles whose contraction tends to displace the fragments.

Fourth. Abduction apposes the trochanter to the side of the pelvis, or if the fracture is near the head, engages the neck beneath the rim of the acetabulum and thus provides a mechanical check to displacement.

Once these patients are up in a good, strong cast, it is remarkable how easily they are handled. Although Whitman does not advise it, it is my custom to get them up in twenty-four or forty-eight hours in a rolling chair and keep them up several hours every day. I have, moreover, in two cases where these unfortunates had to take care of themselves a great deal, flexed the legs slightly so that they could use a commode. I think

this should not be done as a routine, as both of these patients were left with slight eversion of the limb. It should, I think, be done in selected cases where the patients are not apt to bear restraint well or where they have to take a good deal of care of themselves. One of the cases where I did this was in a rheumatic where it was essential that he should get around on crutches soon to avoid trouble in the other hip, which was rheumatic. The other case was a negro who had no one to wait on him at home and had to get around to help himself.

It is a great temptation in these cases to let them attempt to bear weight on the limb too soon. Six months should go by before full weight is tried. During this time and starting immediately after removing the cast the patient should have some one grasp the two feet and exert gentle full abduction of both hips daily to prevent contraction of the strong adductor muscles with corresponding limitation of abduction. Of course, customary attention to the prevention of bed sores must be given though these are nothing like as apt to occur with this treatment even if the patients are kept in bed, for they can be turned about and even over on the belly every few hours to relieve pressure on any one spot. I am doing a good deal of X-ray work in Macon and am seeing the results in these hip cases, and have gotten to the point where I for my part am thoroughly convinced that Whitman is right, and to quote again from Seudder, that "His method is here to stay."

DISCUSSION OF DR. HARROLD'S PAPER

Dr. J. D. Chason, Bainbridge: I have been very much interested in hip-joint fractures for a number of years because I had one myself. I think I walk and move in a manner and with an anatomical conformation that cannot be discovered by anyone in this house, and yet I had a complete fracture of the hip in 1903 with the results as you see now. It is my left hip. The splint used on me was the pneumatic splint made by the Pneumatic Splint Company of Chicago. I got a perfect result, but as Dr. Harrold has shown, the trouble about fractures is that the head of the bone will rise and in some cases where you bring the limb at straight angles, instead of getting bony union, you get ligamentous union. You always get some kind of union, and sometimes you get the results that he

has shown you. You may not get ligamentous union at all. His method is an excellent one because the only thing you have to fear in the doctor's method is the fact the muscles, or the limb rather, has not been pulled down and the muscles stretched to that extent that you get coaptation with the head of the bone and the limb. With that I do not think one can doubt the method at all is a vast improvement. If you put the limb up in a plaster cast and extend it straight, if you can keep it down and thoroughly put it around the foot and know you have it there, you know what the result will be. If you ever bring it down as the doctor has mentioned, getting this angle of 45 degrees, then it is not hard to keep it there after you have once obtained that, because the extension below and above will hold it in that position.

Dr. Michael Hoke, Atlanta: In orthopedic work we do not see many acute fractures. Most of our bone work is in trying to correct something that has not healed right, and we are called upon to correct some malformation or deformity which has resulted from the improper healing.

Those of us who know Dr. Whitman appreciate his ability thoroughly and we are prepared to accept statements from him at face value. Personally, I have had very little experience with Dr. Whitman's method because I do not see acute fractures of the hip. The general surgeons handle them, but I wish to say that Dr. Harrold stated Dr. Whitman's views very accurately, better I think than Whitman himself, and the model he has there demonstrates absolutely that is the only way to hold a fracture like that until union takes place, unless you stick a whole lot of old iron junk in there.

There is a great tendency on the part of general surgeons to operate on every fracture that comes along, not appreciating the fact that in the vast majority of cases, if you go about the thing with an intelligent mechanical appreciation, you may hold the fragments together without applying Lane plates or nails or other iron junk into the bone, and this is a beautiful method for this particular fracture, and should impress the Association with the fact that if men can, by handling fractures with not a text-book description of things, but with their minds and eyes and hands and their mechanical senses, they will be able to put them to-

gether splendidly without surgical interference.

Dr. Richard C. Dodson, Waycross: I would like to ask Dr. Harrold, in using steel, why could he not have used plaster of Paris made in strips and go over the sides the same as he could steel?

Dr. Harrold, in Closing: I think they can be used, but they are a great deal heavier. You can use one or two steel strips which weigh very little, but if you get a corresponding strength of plaster of Paris it would weigh more, and these casts at best are heavy. You want to cut down the weight as much as possible. In the cases I put up I do not run a steel splint under the ankle, I run it around the knee; I brace them.

Speaking of the ambulatory splint, I had the good fortune of spending a few days with Mr. Jones, of Liverpool, a few years ago, and in talking with him about Whitman's method, he said we should not call it such, that he and Thomas of hip-splint fame had been using the abduction method for thirty years. He uses the Thomas hip-splint, but I think that his treatment cannot be used except by the most expert of orthopedic surgeons with the most expert mechanics.

I think Dr. Chason was very fortunate in getting an ambulatory splint that work so well as in his case.

I have a plate here of a fracture treated by the ambulatory splint that did not work so well. It was one of those cases going the rounds now. There is no result at all, and it is a question what shall be done with this woman. She is 70 years of age; she has no union at all. It has been a year and a half since the fracture, and she does not want surgical interference. There are men in Philadelphia, Ashurst and Newell, who have taken some of these cases of non-union and put them up in abduction, and after a year they claim to have gotten some union. This woman is so thoroughly discouraged with life that she does not want plaster of Paris or anything in the world done to her.

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THE MANAGEMENT OF PREGNANCY AND NORMAL LABOR.*

Baxter Moore, M.D., Atlanta, Ga.

My endeavor in this paper is to arouse more interest in one of the oldest subjects in our profession, the management of pregnancy and normal labor.

The pathology of most diseases is now worked out wholly or in part and the treatment for most of them revised, modified or changed entirely and, undoubtedly, benefited, while the management of pregnancy and normal labor, I feel, have stood still.

So far as I am able to learn, there were but two beings who were parties to the actual performance of the first labor or birth; these beings were the first woman and the second man, and regardless of how far back in history I may go, I cannot find that there was anything pathological connected with the birth of this second man. The first labor and the ones which followed for centuries were normal physiological proceedings and continued as such, until the development of man became disproportionate as to the relation of fetal head as to the mother's pelvis.

Civilization caused man to turn his attention to the development of his brain rather than that of his body, and now for some time the development of man has been devoted too much to his brain and not enough to his body.

Far be it from me to advocate the development of man's body at the expense of his brain, but I do maintain that in many cases the body is sadly neglected to lay up temporarily a store of useless knowledge, and especially is this true in the case of so many of our young girls. In a previous paper I went in to the subject of imperfect development as a cause of diseases of women, so I will not dwell upon the same subject in this paper, although it is one of the most frequent and constant causes of complication during labor.

It would be a waste of time for me to go into a detailed description of all that has and is being done at the present time for women who are in the throes of labor pains, but I want to remind you that labor is a normal physiological and not a pathological condition, and should be treated as such.

The care of the prospective mother during the months of her pregnancy is looked upon

*Read at meeting of Medical Association of Georgia, Atlanta, Ga., 1914.

too lightly as a rule, for at no time nor under any conditions in this day and time of preventative medicine can a doctor be of more service. If the doctor will leave no stone unturned so far as his influence with the family goes, to have the prospective mother surrounded by the most cheerful environment possible, he will have done that which means most to the mother at that time and undoubtedly that which will mean much to the offspring.

The pregnant woman should be especially guarded as to her companions, for we know that the sight of a woman in this condition is often the greatest possible stimulant to other women, to tell the expecting mother stories of the most harrowing nature, of the experiences of others during labor and what she may expect during her confinement and labor.

We all know that there are a great many patients who would much prefer to think that they were desperately ill, than to know that they were not, and we also know that there are a great many doctors who play upon this feeling which so many patients have.

Please pardon me for here running away from my subject for a bit, but I feel that this little excursion from my subject will help to bring out more forceably one very important point which I wish to make in this paper. To hear a doctor of the type already referred to, quoted by his patients, "He was called just in time; ten minutes later and it would have been too late to have helped even a little." Cases of such urgency are rare. To my mind, an attitude of this kind is far reaching in its ill effects upon the patient, especially in an obstetrical practice.

Let us now consider the harm done by a doctor taking the part of an alarmist, especially to the woman who is expecting to be confined.

The patient is fully convinced that she cannot get through her labor and confinement without some complication, after being in labor for possibly a couple of hours, the doctor is tired and there is a better fee if the forceps are used; the husband is all but crazy for his wife to get relief, so the forceps are used and rarely are they used that they do not leave their marks, marks, too, which are liable to do so much harm. I do not believe that they are ever used without injury to either mother or child.

The mother has undergone the most har-

rowing ordeal and has much suffering to undergo during the post partum period, and the child has undergone an awful physical strain.

If a head presentation, which most of them are, the child's head has suffered traumatism to at least a certain degree. The brain trauma received at birth is far reaching in its effects, the harm done the different faculties of the brain has not yet been worked out fully, but we do know that it is undoubtedly a cause of traumatic epilepsy and that the evil results may not show for years, and then it is usually credited to some other cause, when really it was due to poor management during labor.

What are the end results of such treatment?

The woman who by all rights of nature an injustice should have had a perfectly normal labor, if slightly prolonged, has been put through one of the most trying ordeals known to man, and under no conditions on earth, if there be any possible escape, would she undergo the tortures of a second labor.

I am sure that there is today no crime so appalling to this and to many other civilized nations, as that of race suicide, and I am convinced that this is one of, if not the greatest factor in the cause of this condition or better, crime.

I realize that a diagnosis, and a correct one, must be made before a cure can be worked out and effected. Assuming that my diagnosis is correct, I am going to outline briefly my idea as to how a woman should be taken care of during the time of her pregnancy and the performance of labor.

See the patient as soon as possible after conception has taken place. Try with the assistance of her family to make her feel that her condition is a blessing instead of, as is often the case, looked upon as a curse. Impress upon the family in every way the importance of keeping the patient in a pleasant, mental attitude.

Outline some form of regular exercise out of doors and select some clean, entertaining literature for the patient to read while sitting around the house. The patient's secretions should be examined at regular intervals to see that her diet is suited to her particular case. After the patient has been seen a few times, so that you are no longer a stranger to her, a thorough physical examination should be made so as to know, so far as an examination will reveal, the possibility of

complications arising during labor. The competent obstetrician can discover any deformities at this examination which may give rise to complications during labor.

Now suppose the patient has run a normal course up to the time when you think the child should be delivered. (I mean this to deal with cases which give a history of normal menstruation up to the time of their conception.)

We are apt to be wrong in our calculation by a few days as to just when the child should be delivered, but if we assume that conception took place just after the last menstrual period, at the end of 282 days after that date we should encourage mildly the commencement of labor. If labor does not start after having received a gentle reminder that it is time for such to come to pass, let the patient rest and calculate upon conception having taken place just before the first menstruation missed was due. If it is necessary to stimulate labor at this time, you are then sure that it is a case of nature being sluggish and needful of a good reminder that it is time for labor to commence.

I have no patience with those who take the stand that they believe in keeping hands off and allowing nature to take its course, especially in cases of delayed labor.

Any man in the medical profession must know that he can cure nothing, the best he can do at any time is to find the cause of disease and remove the cause; he only assists nature at best and there is no time nor condition under which he can be of more assistance to nature than in reminding her that it is time to commence labor.

We all know how rapidly the relations of mother's pelvis and the head of the fetus change during the last few days of pregnancy, and the hardening which takes place in the cranial bones of the foetus during this time. We know that this change of relation in the size of the foetal head and the mother's pelvis is about the very worst condition which can arise at this time. It is a tight fit at best, and it is up to the obstetrician to have the easiest fit possible and at the same time take the best care of mother and child.

After labor has started, if the mother were given time to give birth to her child, I am sure we would not have so many cripples among the mothers.

Few doctors of the present day seem to appreciate the fact that normal labor will

take from two to eight hours for the second stage and that the soft parts rarely commence to dilate so as to accommodate the passage of the foetal head, until the latter part of the second stage of labor is reached.

Much more harm has been done in not giving the patient time to have her child in the normal way, than has ever been done by prolonged labors which have come on time, and even a lot of those who have run over a short time.

I would much prefer seeing all of my labor cases come a little premature than the least bit late, for I am sure that the children, as an average, are, if anything, healthier and the mothers are always better off, for they have both escaped a great amount of physical strain that they would of necessity had to stand had the pregnancy been prolonged.

Where there are slight deformities of the bony pelvis of the mother, by having the child born a week or two and at times even sooner ahead of the full term, it is possible to deliver the child without injury to either mother or child. Where it is impossible to deliver the child in this way, I am in favor of a Cesarean operation.

I feel sure that the time is not far distant when the medical profession will take a more serious and practical view of the management of labor cases and that the obstetrical forceps will be a thing of the past, certainly in its popularity.

I have not gone into the many complications which may arise during the months of pregnancy and the performance of labor and the post partum period, for it was not my intention, but I am sure were the principles set forth in this paper as to the management of pregnancy and labor more conscientiously carried out, there would not be near the number of crippled mothers and children as we have at the present time, and I am well aware of the fact that but a small percentage of the labors complicated by the intrusion of the doctor are being reported at the present time.

In conclusion I will sum up the main points of this paper as I have tried to present them.

First. The care of the pregnant woman should commence as soon as the patient has reason to believe that she has conceived.

Second. The patient should be made to feel that her condition is a normal physiological condition.

Third. Her mental surroundings should be as cheerful as possible.

Fourth. Labor should take place certainly not later than 282 days after conception.

Fifth. The patient should be allowed to give birth to her child after labor has been started.

Sixth. Do not use the obstetrical forceps if it is possible to avoid the use of them.

X-RAY IN THE TREATMENT OF SKIN CANCER.

Cosby Swanson, M.D., Atlanta, Ga.

Until the cause of cancer is discovered and a better remedy for it is found, we, as physicians, have to employ the best means at our disposal, whether it be operative, caustics, X-ray, or some other form of radio-activity.

Each of these methods has its advantages and disadvantages. All recognize that no one of them can be adapted to all patients, nor always to all stages of the disease in the same patient.

In a disease so malignant and difficult to manage as cancer, the omission of any treatment which has proven to be advantageous in producing a cure is to be censured.

In the past almost every conceivable drug or chemical has at some time had its advocates. Arsenic in its various forms probably has been the most favored.

Radium on its advent was hailed as the long-sought cure for cancer. In some cases it has been found to exert a definite action, either by destroying the cancer cells or by retarding or preventing their growth. It is fast falling below expectations. Its advantages lie in its ability to enter growths and cavities, such as the mouth, larynx, pharynx, and uterus that are inaccessible to other methods of treatment.

It is well established that surgical intervention in a large number of cases should be resorted to, especially where there are metastases in the contiguous nodes, where the growth has deeply involved the subcutaneous tissue, or where the lesion can be removed by cutting well around the growth and at the same time preserve sufficient amount of healthy tissue not to interfere with the cosmetic effect.

In spite of the propaganda conducted in favor of surgical intervention in cancer, the majority of patients who come to consult physicians are inoperable from a clinical

point of view and often from an anatomical point of view. This is due in great part to the fact that cancer is not painful in the beginning.

In the treatment of early skin cancer, X-ray finds a great opportunity. There are a few dermatologists who differ in opinion as to the method of using X-ray in the treatment of cancerous growths, but all who have had experience with the recent improved methods of using it, agree that in selected cases it is a very valuable therapeutic agent.

All radiotherapists recognize the disappearance of cancerous tissue under the influence of X-ray which causes a granular degeneration of cancer cells and their replacement by benign scar tissue. In the majority of cases this occurs before the surrounding healthy tissue is affected. This is probably due to the lower degree of vitality or resistance of the cancer cells.

Freund emphasizes that to get the best results with X-ray the same rules apply to radiotherapy as to operative treatment, namely, that intervention should be as early as possible, before the lymph and blood vessels have become involved, and before long offshoots have been sent forth.

In those cases where the growth involves the lymphatics and deep tissue, the best plan of treatment is to combine radical surgery with the X-ray to kill any or all of the cancerous cells that have escaped the knife, without waiting for recurrence to manifest itself. In many cases in which the malignant process has extended far enough to render complete extirpation impossible, by using the X-ray first it is possible to transform the growth from an inoperable into an operable one. The combined use of X-ray and surgery in the treatment of cancerous growths that were formerly thought to be incurable, has given most gratifying results.

In those cases where the growth is so extensive that no method of treatment can promise a cure, using X-ray gives as good, if not better, results than any other method. It will often give many additional years of comfort, save much suffering, and on the other hand, while it may fail to cure, its proper use will not make worse the lot of any patient.

It is very important that the general practitioner and surgeon should realize more the true value of X-ray in the treatment of cutaneous growths.

Of the different varieties of skin cancer.

*Read at meeting of Medical Association of Georgia, Atlanta, Ga., 1914.

epithelioma has probably attracted the most attention.

Any epithelioma on the surface may be destroyed with Roentgen rays, whether of the basal or squamous cell type. Some lesions yield much more readily than others; basal cell most readily. In exceptional cases of squamous-cell epithelioma, there seems to be a greater resistance, but in no epithelioma on the surface is there a complete resistance to the effect of the X-ray when properly given in sufficiently large doses.

To get the best results from the use of X-ray in treating cancerous growths, the duration of the treatment is most important, as few exposures as possible to secure a cure should be used. Irradiation should not be discontinued or lessened in frequency until the disappearance of every manifestation of the disease. The rays must be supplied in sufficient quantity to excite the fullest reaction which is compatible with the integrity of the surrounding normal tissue. We should with as much accuracy as possible endeavor to irradiate the tissue with sufficient quantity and quality of rays necessary to produce a cure of the patient.

In using X-ray the effects and results depend upon several factors. A working knowledge of electricity, a good machine, a tube of known diameter and vacuum, a shield, Sabouraud-Noire pastille and holder, lead foil, aluminum screens, Benoist's penetrometer.

The machine suitable for therapeutic purposes must be one which will keep a tube of medium vacuum in operation twenty to thirty minutes without altering the vacuum.

The tube should be of medium vacuum, one that is capable of penetrating the thickness of the skin. The advantage of using a tube of medium vacuum are that a greater portion of the current traversing it is converted into X-ray, the rays are more readily absorber, react more powerfully on the tissue, and particularly on the skin. The quality and power of penetration of the rays can best be estimated by an instrument devised by Benoist in which the rays are passed through various thicknesses of aluminum and the power of penetration is determined by a fixed scale. A tube with a penetrating power between five and six Benoist scale is usually desirable for treating cutaneous growths.

If a coil is employed to actuate a tube a given number of interruptions per second and a given amperage of current must be

maintained throughout the exposure. A change in these factors may modify the degree of penetration, as well as increase or decrease the quantitative value of the rays.

The extent of the reaction of the X-ray depends upon the quantity of rays which strike and penetrate the tissue. To gauge the quantity of rays place a Sabouraud-Noire pastille in a pastille holder directly in front of the anode at a distance of exactly seven and one-half centimeters from the anode. The amount of rays necessary to change the pastille to an orange color (Tint B) is called a pastille dose. This is the quantity of rays just short of producing an erythema at a distance of fifteen centimeters from the anode. It is very necessary that the distance be exact, for it is well known that the strength of the rays is inversely proportional to the square of the distance of the tube from the patient.

The shield should be made of lead glass, adjustable to distance as well as to the size of its aperture. By using a lead glass shield and at the same time covering the healthy tissue with lead foil, we can confine the rays to the area under treatment.

It is well known that an X-ray tube emits a number of rays of different degrees of penetration. The aluminum screen is used to filter out the rays of weaker penetration that have their main action on the skin, thus allowing longer exposures to the more penetrating rays that have their effect on deep seated structures.

The following are some cases with superficial cancer that I have treated with X-ray since beginning the use of Sabouraud-Noire pastilles to measure the quality of rays and Benoist's peretrometer to gauge the quality of the rays. A brief review of them is as follows:

Case No. 1. Miss M. T., 40 years. Epithelioma of the nose, size of quarter, one year's duration. Pastile dose, one. Treatments, seven. Intervals, seven to fourteen days. Eighteen months later no recurrence.

Case No. 2. Mr. J. C. B., 73 years. Large ulcerating carcinoma, on the right cheek, size of a hen's egg, one year's duration. Pastille dose, one. Treatments, ten. Intervals, fourteen days. After three exposures lesion was curetted, all cancerous tissue removed, then cauterized with pure nitric acid; X-ray continued. Eleven months later no recurrence.

Case No. 3. Mrs. N. L., 56 years. Epi-

thelioma middle of the nose, size of hazel nut; three years' duration. Pastille dose, one and three. Treatments, six. Intervals, fourteen to thirty days. First exposure three pastille doses were given, the other treatments were one each. Thirty months later no recurrence.

Case No. 4. Mr. J. L., 83 years. Epithelioma of the nose, involving the lower half of the septum, alae and part of the upper lip, four years' duration. Pastille doses, one-half and one. Treatments, twenty. Intervals, fourteen to twenty-one days. Ten months later no recurrence.

Case No. 5. Mr. M. L., 48 years. Epithelioma of the left side of the nose and cheek, three years' duration. Pastille dose, one. Treatments, ten. Intervals, seven to fourteen days. Eighteen months later no recurrence.

Case No. 6. Mrs. E. S., 48 years. Rodent ulcer of the left cheek, size of child's palm, three years' duration. Pastille dose, one. Treatments, ten. Intervals, ten to fourteen days. First cauterized with pure nitric acid, then exposed to the X-ray. Two years later no recurrence.

Case No. 7. Mr. J. B. D., 66 years. Epithelioma of the cheek, size of quarter, one year's duration. Pastille dose, one. Treatments, five. Intervals, fourteen days. Eighteen months later no recurrence.

Case No. 8. Mrs. G. L. H., 37 years. Epithelioma of the nose, size of quarter, one year's duration. Pastille dose, one-half and one. Treatments, twenty-two. Intervals, seven to fourteen days. Healed very slowly, after tenth exposure cauterized with pure nitric acid. One year later no recurrence.

Case No. 9. Mr. C. M. R., 49 years. Epithelioma of the nose, size of fifty-cent coin, eighteen months' duration. Pastille dose, three. Treatments, two. Intervals, thirty days. Large doses were given on account of patient living out of town. Six months later no recurrence.

Case No. 10. Mr. T. B. M., 41 years. Epithelioma of the upper lip, size of an almond, one year's duration. Pastille dose, three. Treatment, one. Growth was first excised, then exposed to the X-ray. Sixteen months later no recurrence.

Case No. 11. Mr. H. E. E., 39 years. Carcinoma side of the nose and cheek, size of child's palm, two years' duration. Pastille dose, one. Treatments, twelve. Intervals, seven to fourteen days. Healed very slowly:

after five pastille doses cauterized with pure nitric acid. Seventeen months later no recurrence.

Case No. 12. Mr. S. G. W., 45 years. Epithelioma of the olver lip, size of an almond, nine months' duration. Pastille dose, one. Treatments, seven. Intervals, seven to fourteen days. Two years later no recurrence.

Case No. 13. Mr. E. S. O., 66 years. Ulcerating epithelioma of the lower lip, size of man's thumb, two years' duration. Pastille dose, one. Treatments, seventeen. Intervals, fourteen to twenty-one days. Lesion healed with slight scar tissue formation. Eighteen months later no recurrence.

Case No. 14. Mr. M. W., 72 years. Rodent ulcer of the right temple, size of half dollar, six years' duration. Pastille dose, one-half and one. Treatments, fourteen. Intervals, seven and fourteen days. Treatment discontinued January, 1912, apparently cured. Two months later returned with another lesion about two inches below the first one. Died with pneumonia while still under treatment for the recurrence.

Case No. 15. Mr. M. C. M., 72 years. Carcinoma of the left temple, size of small orange, three years' duration. Pastille dose, one-half and one. Treatments, twenty. Intervals, five to ten days. Six months later apparently cured, no sign of recurrence, still under observation.

Case No. 16. Mr. L. B. M., 39 years. Epithelioma right cheek, size of half dollar, one year's duration. Pastille dose, one. Treatments, ten. Intervals, seven and fourteen days. Two years later no recurrence.

Case No. 17. Mr. I. J. B., 50 years. Epithelioma of the temple, size of walnut, eighteen months' duration. Pastille dose, one. Treatments, ten. Intervals, seven to fourteen days. Eighteen months later no recurrence.

Case No. 18. Mr. L. B. P., 61 years. Epithelioma left cheek, size of quarter, two years' duration. Pastille dose, three. Treatment, one. Lesion was excised, then cauterized with pure nitric acid; one week later exposed to X-ray. Two years later no recurrence.

Case No. 19. Mr. J. T., 60 years. Carcinoma on the shoulder, size of child's palm, eighteen months' duration. Pastille dose, one and two. Treatments, four. Intervals, fourteen to thirty days. Growth excised, then exposed to X-ray. One year later no recurrence.

Case No. 20. Mrs. H. D. C., 66 years.

Rodent ulcer of the right temple, size of half dollar, one year's duration. Pastille dose, one. Treatments, seven. Intervals, seven to fourteen days. Twenty-eight months later no recurrence.

Case No. 21. Mr. J. S., 40 years. Rodent ulcer of the cheek, size of quarter, one year's duration. Pastille dose, three. Treatment, one. First cauterized with pure nitric acid, then exposed to the X-ray. Two years later no recurrence.

Case No. 22. Miss F. H., 34 years. Epithelioma of the neck, size of an almond, ten months' duration. Pastille dose, one. Treatments, ten. Intervals, seven and fourteen days. Lesion first excised, then exposed to X-ray. Fifteen months later no recurrence.

Case No. 23. Mrs. L. H., 48 years. Epithelioma of the temple, size of child's thumb, three years' duration. Pastille dose, one-half and one. Treatments, ten. Intervals, fourteen to twenty-one days. Ten months later no recurrence.

Case No. 24. Mr. W. A. H., 47 years. Epithelioma of the cheek, size of an almond, six months' duration. Pastille dose, three. Treatment, one. Lesion first cauterized with pure nitric acid, then exposed to the X-ray. Fourteen months later no recurrence.

Case No. 25. Mr. W. D. G., 44 years. Epithelioma of the lower lip, size of an almond, six months' duration. Pastille dose, one-half and one. Treatments, ten. Intervals, seven and fourteen days. Eighteen months later no recurrence.

All of the above cases were carcinomatous growths with no deep metastases or palpable glands. There were eighteen epitheliomata, five rodent ulcers, and two carcinomata. The shortest duration of any growth was six months, the longest five years. The youngest patient was thirty-four years and the oldest eighty-three. Seven occurred on the nose, seven on the cheek, five on the temple, one on the neck, one on the shoulder, one on the upper lip, and three on the lower lip.

Before beginning treatment with X-ray the growths were excised in four cases and cauterized with pure nitric acid in two cases. In five cases nitric acid was used in connection with the X-ray, and in two cases both the nitric acid and the curette were at times used during treatment. In the remaining fifteen, X-ray alone was used.

When the X-ray was used alone in the treatment, the fewest number of pastille doses were six, the greatest number twenty;

the average number of exposures were eleven and the average number of pastille doses ten and three-tenths.

Sixteen of the cases have been dismissed as cured, a year or more having elapsed since discontinuing the treatment; six are still under observation; one died with pneumonia before finishing the treatment.

One can readily realize from the results in the above cases that the number of treatments vary largely; it also shows that to get the best results from the use of X-ray, while the effect depends largely upon the quantity and quality of the rays, the location, size of the growth, and sensibility of the tissue have to be taken into consideration.

In conclusion, the advantages of using X-ray in the treatment of skin cancer are, that it is applicable to many growths that are so extensive or involve such important structures that their removal would be impossible. It retards the growth from the beginning. It is harmless and painless when properly used, thereby freeing the patient from dread and induces many patients to report for treatment early, thus increasing the chance of recovery. It reaches the tissue surrounding the growth at the same time that it attacks the growth proper. It destroys the diseased tissue and leaves very little scarring, which makes it especially adaptable for growths on the face where good cosmetic effects are so desirable.

The modern diagnosis and treatment of disease cannot, at the present time, be made without the aid of the clinical laboratory, and we wish to call the attention of the readers of this Journal to the laboratories whose advertisements we carry and whose reliability and ethics are dependable. The physician may send to these laboratories any kind of specimen for diagnosis, and the result will help both the physician and his patient. Many physicians are not acquainted with laboratory technique, and by becoming acquainted with clinical laboratories of such high standing as these will often times derive more benefit than if they would take a post-graduate course.

An advertisement in The Journal of the Medical Association of Georgia will bring results. Rates sent on request.

Every doctor should keep up in pharmaceutical advance.

THE PRESENT STATUS OF RADIUM. REPORT OF CASES TREATED.*

T. E. Oertel, M.D., Augusta, Ga.

My use of radium as a medicament began five years ago. Unfortunately it has been limited to the use of small quantities. At first I procured a tube containing 10 milligrams of pure radium bromide, a short time after I purchased two varnish preparations, exact strength unknown, and again another tube of 10 milligrams of pure radium bromide. It has been demonstrated that such quantities are too small for utilization in many cases where disease is advanced, or where there is, as in certain skin conditions, a large surface to be treated, and again where "cross firing" is necessary in treatment of tumors beneath the surface of the skin, or in the various cavities of the body. In spite of this handicap the number of cases benefited has been gratifying and certain cases have been free of all symptoms for a period of several years, and in these we are warranted in employing the term "cured." In order to illustrate what may be hoped for by proper treatment with the above quantity of radium, it is perhaps well to briefly review a few of the conditions treated, with the result so far as known.

Cancer of the Uterus.

No case has come to my hands which was not in the last stage of an inoperable condition, except two, to be mentioned. Six such cases have been treated. Five of them were benefited and life prolonged and made more endurable. The benefit consisted in relief of pain, diminution of the distressing foetid odor, marked decrease of discharge and hemorrhage. To one familiar with the picture of this most horrible disease the above means much. Other observers who have had at their command larger amounts of radium, have reported many cases of cure of cancer of the uterus, even in advanced stage and the amelioration of distressing symptoms in many others.

Often the use of radium will so change the picture that an operation may be performed and the after treatment with radium will complete the cure. Two such cases are now under treatment, but it is too soon to predict the outcome, though at present they are

doing well. One case of cancer of the rectum treated with a tube containing 10 milligrams of radium bromide has been well for four years. The case was in desperate straits when treatment was instituted, the growths having caused the lumen of the gut to contract until only when the stools were entirely liquid could they be passed. Towards the latter part of the treatment the breaking of the tube while in place I lost 4 milligrams of radium. Doubtless some part of this was retained for a time, at least, in the folds of the tissues and in this way has contributed to the happy result.

Epithelioma.

The flat cell variety of cancer which has its origin in the mucous membranes which are covered with stratified squamous epithelium, notably, the mouth, eye and vestibule of the nose, are much more prone to rapid growth and extension to distant parts than similar growths in the skin. Of the latter variety it may be said that in the early stages radium treatment is specific. As the condition has proportionately advanced, so has the cure by any means in inverse ratio. The great advantage of radium in the treatment of these growths is its painlessness, freedom from scar and the avoidance of operation. In elderly people, in whom these growths are common, general anesthesia is a serious matter and should be avoided, and in many cases the patient is entirely unwilling to submit to any cutting operation. Thirty such cases have been treated with uniformly good results except in one instance, an epithelioma of the forehead, which was undoubtedly rendered worse by the treatment. The patient refused operation, passed into the hands of a quack who used an escorrotic paste, and shortly died.

Epithelioma of the Eyelid.

I have to report four cases, two cured and two discontinued treatment.

Epithelioma of the Upper Lip.

Three cases, two cured, one discontinued treatment, though benefited.

Epithelioma of the Lower Lip.

One very large, operation and radium. Has been without symptoms for a year. Five early cases treated have recovered.

Epithelioma of Tongue.

One case, very early, of tip, cured.

*Read at meeting of Medical Association of Georgia, Atlanta, Ga., 1914.

Epithelioma of Floor of Mouth.

Two cases advanced, both died.

Epithelioma of Orbit. (Rodent Ulcer Type.)

Two cases, both of these were advanced; pain was relieved in one, the other not benefited.

Epithelioma of Nose. (Involving Mucous Membranes.)

Eight cases, one treated by combined operation and radium. Seven recoveries. One very much benefited; operation and continued radiation advised and refused.

Epithelioma of the Ear.

Three cases, all apparently recovered. One has since recurred and is still under treatment.

A very interesting case of epithelioma of the conjunctiva was successfully treated by combined operation and radiation. The growth had invaded and extended entirely across the cornea. Good vision was obtained and a year has elapsed without return of the condition.

Sarcoma.

Two cases of sarcoma have been treated by combined operation and radiation. One of these was a spindle cell sarcoma of the alveola process of the lower jaw. One was a large "giant cell" sarcoma of the lower jaw which had destroyed most of that bone on the left side. The results in both cases were all that could be desired, there being no recurrence in either case after two years.

Of non-malignant growths and cases I have treated the following:

Lupus vulgaris of forearm; cured.

Vascular nevus; two cases cured, one benefited, two unimproved.

Indolent ulcer of the cornea; one case cured.

Keloid of breast; one case, cured.

Eczema of auditory canals; four cases, all cured.

One of these cases was of forty years' standing and had been treated by many of the foremost aurists of the world.

Another was of ten years' duration. There was foul discharge, swelling, redness, pain and loss of hearing to such an extent that the patient could only hear when one shouted in his ear. The discharge ceased, the canals and drums assumed a nearly normal appearance and the ordinary voice could be easily heard at a distance of ten feet.

A number of cases still under treatment are not included in this report. I think it is not too much to claim that even when the amount of radium available is quite small the results obtained may be of great value.

I do not for a moment wish to minimize the great advantage of the use of larger quantities. In fact it has been my hope to somehow secure a considerable quantity of radium salts for use in this section of the country.

Many of the cases reported were charity cases. In my opinion the supply of radium should be in some way so distributed that various stations could be established where people of limited means might have the benefit of this treatment and even those entirely without means could by presenting proper credentials receive treatment from which they would be debarred if it were necessary to travel to a distance.

Manifestly only the well-to-do are able to travel, to leave their vocations and go to distant parts, no matter how urgent is the need for so doing. The South has no such stations and there is crying need for one.

Radium is not a panacea. Radium is of great value as a curative agent, and properly used holds out hope in conditions where otherwise there is none.

Much is still to be learned relative to its proper employment. In unskilled hands it is capable of working harm instead of good. At the present moment we can say that it is still in the experimental stage, but that enough has been learned for us to be sure that its range of usefulness will extend far beyond present limits when we shall have sufficient working material at our command and shall have gained further skill in its application.

GEORGIA SURGEONS' CLUB.

Owing to the depressed conditions throughout the country, the clinical meeting of the Georgia Surgeons' Club has been postponed from November to some time in the spring after the unsettled conditions have been adjusted.

An advertisement in The Journal of the Medical Association of Georgia will bring results. Rates sent on request.

Does your card appear in the Professional Directory?

SALVARSAN.*

Jack Swafford, M.D., Athens, Ga.

Salvarsan, commonly known as "606," and Neo Salvarsan, popularly known as "914," have sprung into great popularity within the last eighteen months on account of the claims of the manufacturers that they would cure syphilis. It remains for the profession generally to disprove this statement, and if I make no other point in this brief paper, I trust the one fact that Salvarsan will not cure syphilis by itself will be shown.

It has been repeatedly shown by some of the best syphilographers of the country that Salvarsan and its allied products will merely control the ravages of the disease for a brief period.

Indications. Salvarsan is indicated at any stage of the disease. It quickly heals the primary sore and controls the eruption, and is also valuable in the many post-syphilitic nervous diseases. Because of its quick action we thus protect our patient from many social complications. But bear in mind it cannot be relied upon as an absolute cure when used alone.

Contra-Indications. As the eyes and kidneys suffer mostly from its use, it should never be administered where the patient already has a kidney condition or an eye condition, especially nephritis or retinitis, likewise any serious disturbance of the organs of circulation, much advanced degeneration of the C. N. S., as well as in cachexias, unless cachexia is a direct consequence of syphilis. Also, it is contra-indicated when the patient possesses a pronounced idiosyncrasy against arsenic.

I am of the opinion that the treatment of syphilis is in a very unsettled state. One authority advises fifteen or twenty doses of Salvarsan at short intervals; another prefers three or four large doses at rather long intervals; another uses mercury in connection, given intravenously at the same time with the Salvarsan; another prefers the mercury given hypodermically, and still another by inunction, and so on ad finitum.

I have gone over the literature of the past year with some degree of care and must confess that the more I read, the more confused I become as to what is the approved plan, or what is the best for me to do for

my patient. Realizing this, I have for the past six months or more adopted the following plan: Presuming the patient to be an early case, with a sore that we have demonstrated both clinically and microscopically to be syphilis, or have had to wait until we could get a positive Wasserman, I give the patient a full dose of 0.6 grams of Salvarsan intravenously once a week for three weeks, then have him run in mercury, which I prescribe in gradually increasing dose, beginning with one-half drachm of mercury mixed with some proper ointment base, and I gradually increase the dose until at the end of forty nights the dose has reached one drachm. At this time I discontinue all treatment and have a Wasserman made at the end of three months; if negative, I discontinue treatment and have another made at the expiration of another three months. If still negative I again discontinue treatment and the result is that very few patients will require immediate treatment. If positive I repeat the above treatment. The Salvarsan is better than the Neo Salvarsan, for the reason that it is more efficient. It is, of course, a little more difficult to mix and is possibly a trifle more toxic, but it is certainly more efficient. I never expose a vein and have had no trouble from this source. My reason for using one injection a week is based on the report of McDonough of England, who has demonstrated that the spirochaetae live in the connective tissues cells and that about every week they multiply in sufficient numbers to break through the enveloping cell membrane and circulate in the blood.

It is my idea that the solution should be there to meet them, so to speak. It is the same idea with which we administer quinine in the treatment of malaria. My reason for preferring the inunction over any other method of administering mercury is based upon the report of Watrezewsky of Poland, who treats annually more than three thousand cases and who has given very careful consideration of this point. He found that after treating case with pills or by hypodermatic administration that the percentage of relapses was 85, and that after the same course with mercury by inunction the percentage of relapses was only fifteen. The entire profession is rapidly falling into line on this point, and I may say the choice is now the inunction method. I may say that the better element of the profession is also com-

*Read at meeting of Eighth District Medical Society, Athens, Ga., September 22, 1914.

ing back to the Salvarsan and are giving up the use of Neo Salvarsan.

In passing, gentlemen, I might mention that there are many apparatuses on the market today for the administration of Salvarsan, and one seems as good as another. Personally, I prefer the gravity method to the simple syringe method; but this is purely optional to the physician. As I have already stated, the reaction following the administration of the Salvarsan is more severe than from the Neo. The physician should not be alarmed if the patient seems to be in a bad way the first six or seven hours. They usually complain of intense headache. The temperature rises rapidly to 103 and 105 degrees, following a decided chill. The blood pressure is lowered at first and later is raised. The bowels are loosed, but will come around in a few days, and usually at the end of the first twenty-four hours the patient is suffering no ill results.

In conclusion, gentlemen, I wish to emphasize these facts:

First, that Salvarsan is only valuable as an adjunct treatment, and should be repeated at intervals.

Second, the course of the disease is not shortened by its use.

Third, the treatment of the disease should extend over a period of from two to three years. Last, but not least, the Wassermann test should be made from two to four times per year, continuing for some years after all treatment has been discontinued.

PROPOSE NEW MEMBERS NOW.

This is the season of the year in which to solicit new members in the county societies. As in the past, the executive committee has authorized the remission of dues for the balance of 1914 to new members who are elected after November 1, and the assessment collected at the time of their election will be applied to their 1915 dues. Members who anticipate proposing names of physicians for membership in the county society should take advantage of this concession now and send in their applications to the county society at once.

An advertisement in The Journal of the Medical Association of Georgia will bring results. Rates sent on request.

THE PRESCRIPTION.*

**R. C. Wilson, Professor of Pharmacy,
University of Georgia.**

In considering the subject, "The Prescription," it may be well for us to consider something of the history of prescription, something of the changes it has undergone, both as regards its character as well as its scope, and something of our present conceptions as regard it. I shall endeavor to discuss these matters briefly in the course of my remarks.

The practice of medicine, medicinal agents themselves, and even our practitioners of today have surrounding and accompanying them, in the eyes of the public, at least, something of the same superstitions which existed in the earliest annals of medicine.

Our prescription of today, with its familiar Rx, bears evidence of the prayer to Jupiter the Supreme, to direct its action, as in the days of Hippocrates.

Medicine and superstition seem to have been preordained to be closely interwoven, and sometimes I wonder if we are making much progress in disillusioning ourselves.

That something, so integral a part of every human being, call it as you will faith, superstition or imagination, yields itself unconsciously yet perceptibly to the mysterious and unknown.

Patent medicine venders, keen students of human nature as they are, masters in the art of advertising, realizing this fact, are passing their wares along to a suffering yet gullible public. They are even realizing this trait in the physician and are feeding you the vilest, the most unscientific literature, exploiting remedies for pecuniary gain alone, yet which deceive you and beguile you into passing them along to the unfortunate victim who has appealed to you for help, who thus implied confidence in your ability and integrity. But you, alas, also human and with perhaps your superstition in the things unknown, are betrayed by the choice literature or suggestive title of some proprietary into becoming the sponsor for and purveyor of this, the vilest class of nostrums.

From figures which I have gathered from different sections of the State, approximately fifty per cent of the prescriptions on file in the drug stores of Georgia call for remedies of this character. These should not be digni-

*Read at meeting of Fifth District Medical Society, Athens, Ga., September 22, 1914.

fied by the name "prescription." They reflect no credit upon you practitioners of medicine, no evidence of your acquaintance or approval of standard or ethical remedies, but that you are placing yourselves into the hands of a third party who is writing your prescriptions for you, and using you to further his own purposes.

The patient and the pharmacist want to think of your prescription as being dignified, as representing knowledge, as being ethical and above all things as being efficient. Gentlemen, does this fifty per cent of the prescriptions of which I have spoken, maintain the dignity of the profession. Do they represent efficiency to you? Or is it your wish that your prescription should be so considered?

The patient is reading your prescription of today in many cases. They are asking themselves questions in regard to it. They are beginning to awaken to the fact that scientific knowledge has played no part in its composition or adaptation, perhaps. Gentlemen, the awakening of the lay citizen fully to the situation will be a sad one for the profession of medicine and pharmacy, unless steps are taken promptly to remedy the present and growing tendency toward easy but unscientific administration of medicine via the prescription route.

How often have I for purely ethical reasons (and my experience is that of every other pharmacist) had to sear my conscience when the patient has asked my opinion of some proprietary called for by the prescription. The question presents itself, "How can I be honest, and at the same time protect the prescriber?" It may or may not be to the credit of the pharmacist, but he usually protects the prescriber.

These proprietary manufacturers, not satisfied with the result of advertising, in an endeavor to still further increase the demand for their products, I am told, have put on a deal whereby the physician gets a rebate on goods prescribed by him or sold in his territory. I am told further that certain physicians in Georgia demand rebates from the pharmacist on prescriptions filled by that pharmacist. Naturally that pharmacist offering the largest rebates gets the greatest number of prescriptions where they can be controlled, the patient very probably getting inferior products and suffering the increase in price, for the pharmacist must have his profit. I cannot picture to myself a viler

scheme to defraud. It might go further by a combination on a rebate basis with the undertaker and a corner on cemetery lots. This is what present prescription practices are leading us to, but alas this is not all. The medical profession, through the prescription, is unwittingly constituting itself into one grand organization for advertising and exploiting patent medicines. Laying aside all question of our true knowledge of them, admit that our proprietary medicines of today are "ethical" preparations. Honestly, we think of them as being "ethical" only because of the fact that they are advertised only to physicians, but forget that, I say. How long do you suppose they will remain "ethical?" Only long enough to find a prominent place on the shelves of the drug store, and a ready sale. They are truly "patent" medicines now no longer "ethical." Thus year by year, there are being added to the vast number of patents already on the market, many others.

And, yet again, the medical profession is undermining professional pharmacy. A pharmacist's training is intended to fit him to accurately and intelligently fill physicians' prescriptions. Our schools of pharmacy being established and maintained for this specific purpose, but of what value is chemical and otherwise scientific pharmaceutical training in filling this fifty per cent of prescriptions? Does it require special fitness or training to interpret "re-bottle et sig."? Why does he not send such an order to a groceryman, butcher or department store. Any one can "re-bottle et sig." Honestly, now, why does the physician accompany his order for these products with direction to "re-bottle"? Is he unwilling that his patient should realize what is being perpetrated against him? I have earnestly and conscientiously endeavored to get at the bottom of this matter. I can but feel the incompatibility, the incongruity of the practice, yet I wanted to believe the practice justifiable. My love for the professions of medicine and pharmacy prompted my endeavors. My respect for and confidence in them, I felt, must be justified.

I have said this unethical practice is undermining professional pharmacy, and we have but to look about us to realize this. The pharmacist, finding his scientific training of no value to him, finding that the physician does not demand and seemingly cannot appreciate the standard and standardized products, finding that the application of the pure

food and drug tests to his products curtails his profits since the physician does not want, in some cases, for his prescription to "cost too much," he must turn to side lines as an avenue of profit. Under the present regime, any one may become a "pharmacist" in the sense that he may dispense physicians' prescriptions of this character, for that requires, as I have shown, no knowledge of scientific principles. But the pharmacist of today and the pharmacy of today is far different from our ideals and our aspirations of what they should be. By this practice, then, you are virtually, I will not say virtuously, destroying a profession which was intended to supplement, and which is capable of such service, your efforts in conserving the health and happiness of our fellow citizens. There is no man, trained in the sciences underlying the practice of pharmacy, but who desires to see a purely ethical drug store, and, discarding all patents and other sidelines, confine his efforts and his talents, contribute his part toward efficient and ethical medication.

The statement has been made on the floor of your State Association meeting that the young physician is turned out from the medical schools without having been given any training in prescription writing. I am prepared to accept this statement. He thus falls a victim at once to the wiles of the specialty man, and indorses and finally an habitue of stereotyped yet unscientific prescription writing. In a study made of this subject by Dr. H. R. Slack of La Grange and embodied in a paper read by him before the American Medical Association, he shows that in a number of dispensaries in charge of your largest and so-called best medical schools of the North and East, the custom of using numbers for various combinations prevailed to a large extent, and that only a very small percentage of the prescriptions on file were really prescriptions. Students in these institutions, of course, received no training in the science or art of prescription writing.

Those of you who have had these experiences, who desire that future physicians shall be spared the pitfalls which beset them on all sides, should take this matter to your schools of medicine and see that their curricula take care of the subjects of prescription writing. Those of you who are already practicing, should individually and collectively become acquainted with the United States Pharmacopoeia, the National Formulary and the Reports of the Council on Pharmacy and

Chemistry of the American Medical Association. If you will confine your prescriptions to the drugs, combinations of drugs and chemicals indorsed by the authors of these standards, you will find that soon ethical drug stores on every hand, and that you are more successful in your treatment because of the use of standardized products, and further, that the medical and pharmaceutical practitioners will be stimulated to contribute one to the other those things which bring about true efficiency.

In this way, through this co-operation between the physician and the pharmacist, the so-called patent medicine evil will be solved as in no other, but so long as the physician ignores standard and standardized products, just so long will the pharmacist recommend and sell patent medicines, and there is no reason why he should not.

There is another class of prescriptions of which I would speak, of which we find quite a number, the so-called "shotgun" prescription. Usually these call for truly ethical preparations, but they can scarcely be called ethical combinations, since we find here nearly always instances of pharmaceutical, chemical and oft-times flagrant therapeutical incompatibilities. Whenever I see prescriptions of this character, I am reminded of a friend of my boyhood, an old negro man, Uncle Nelson, with whom I hunted quite a lot. He told me of the existence, which to him was real, of a "rambling gun," which, if carried to the head of the swamp and the discharge directed down the swamp, the shot would "ramble" about and kill every rabbit in the swamp. The principle involved in the use of this class of prescription lacks the same elements of true scientific explanation as was true of Uncle Nels' "rambling" gun.

If you ask for my conception of a truly ethical prescription, I would describe it as being written on uniform white blanks of your own purchase, bearing no name of the pharmacist; written legibly either in English or Latin, with no abbreviations for the medicinal agents ordered, and calling only for ethical products, my conception of an ethical product being one whose identity may be established, whether it be organic or inorganic, and whose purity and strength may be established, and bearing evidence of no pharmaceutical, chemical or therapeutical incompatibility.

Mr. President and Gentlemen, while I have dealt plainly with this subject, I trust that

you do not construe my remarks as an "attack" upon the medical profession, as nothing is farther from my mind. I take it that when you invite those not of your own profession to address you, you want other viewpoints than your own in matters vital to the practice of medicine, and, bearing this in mind, I trust that you will properly interpret this message. This, then, is not a call to arms, but rather a call to judgment and discretion.

DIET AS A MEANS OF ORAL PROPHYLAXIS.*

Maxie T. Summerlin, D.D.S., Athens, Ga.

A number of years have passed since the wonderful research work of Miller and others proved to the world at large, and to the dental profession in particular, the cause of dental caries—yet we are looking around for a cure. The mechanical side of our profession has developed to a wonderful degree, a degree nearing perfection. In fact, we have expanded in scientific lines and in all other ways. The dentists today are saving millions of carious teeth and treating successfully oral diseases and malformations of all kinds, doing oral surgery with marked success, and correcting malocclusions. In fact, we are working hard to produce normal oral conditions and to reduce the decay in teeth.

But what progress are we making toward a cure, to truly prophylactic treatment, toward the elimination of dental caries? The medical profession is working toward cures, toward immunity, and viewed in this light, the dental profession has gone a bit lame in the march of progress. From the present tone of our dental literature, and from the investigation of our oral hygienic committees, it would seem that we are about to get a start in the right direction. And what is that right direction? From a practical standpoint, and by the process of elimination, we can unhesitatingly say, "Diet," and this subject, in its many practical phases, is what I propose to dwell upon.

The Mechanical Phase of Dental Prophylaxis.

For a number of years we have listened to papers and seen clinics on oral prophylaxis, on cleaning and polishing teeth. We have profited by them, and have obtained results by their teachings, and it is not in a spirit of

criticism that I ask, "Is this form of prophylactic treatment the real fundamental principle of the prevention of diseases of the dental organs?" Certainly it is that, if we lived correctly in regard to diet and habits, as there would be very little need for prophylactic treatment of this nature. I will quote the following from Dr. Kirk: "Has it come to pass, in the economy of God Almighty, that humanity, in order to live, to retain its dentures in a state of integrity, must make a never-ending fight with the toothbrush?" Is there anything else we have to do in struggle for existence that is comparable with this thing? Would it not be a very bungling piece of work on the part of Dame Nature for her to make it necessary that, in order to survive to the extent of saving our teeth, we must continue to depend upon these mechanical means? Immune individuals do not; then why should anyone?

Diet in Its Bearing on Dental Caries.

According to Dr. Black, the texture and form of teeth have no bearing on their liability to decay. Environment is the keynote to be sounded. There is a proper diet for maintaining a clean and healthy condition of the teeth and gums, and there can be no question about the possibility of a diet so well balanced that one would attain the highest nutritional efficiency, and with this theoretical diet, an immunity to dental caries. This diet would stimulate and produce the normal quality and quantity of saliva, and will not be dependent upon a waste product like potassium sulfoeyanate for its efficiency in producing immunity. The food problem in chronic disease is now considered much more important than all the other factors combined. This will make a good text for our further consideration, for the food problem is as much important to the dental as it is to the medical profession.

Effects of Carbohydrates on Teeth.

There can be no question of the fact that most of our dental disorders are fundamentally produced by what we eat and how we eat it. The number of people living in this community who live almost entirely from baker shops is astounding. They live on pies, cakes, doughnuts and fresh breads, with numerous sweets and syrups. This is strictly a carbohydrate diet, and considering the fact that the bread is always fresh and soft, and the foods are washed down with liquids,

*Read at meeting of Eighth District Medical Society, Athens, Ga., September 22, 1914.

such as tea and coffee, etc., it is easy to see where the teeth come in, or rather come out. Nature, the greatest economist, will not support anything which is unnecessary, and people who live on this diet do not need teeth, and I may say do not have them long.

City Diet.

In making public school examinations in New York recently by Dr. Miller, it was found that in certain districts the children were fed principally upon baker's buns and tea. Needless to say that he found these the worst districts in the whole city, but in the sections inhabited by the more recently arrived immigrants the diet was of a coarse, harder and more nourishing nature, and the oral conditions were accordingly better. But how easy the newly arrived immigrant, who has lived on coarse, hard food in his own country, takes to our carbohydrate diet, and goes us one worse by taking entirely to starches and sugar! This situation is both pitiable and lamentable, for aside from the dental conditions, this diet will not raise healthy, wholesome American citizens.

Country Diet.

So much for large community conditions, but I do not intend to let the ruralist go without a word. The diet of our rural communities is as bad, or worse, than that which has been spoken of in regard to the poorer classes in the city. The rural diet is similar to that mentioned except that it is home made, and in some instances, doubtless, is less wholesome, and to this diet is added the omnipresent pig meat, almost to the exclusion of all other meats. The ruralist of today is too apt to sell all the good things of the food variety and to bring up his family on what cannot be converted into money. I have been to lumber camps where the food was wholesome and of the best, but the men would eat a hearty meal in less than ten minutes, washing down the foods with liquids and masticating practically none of it. They need no teeth for this sort of thing and consequently have practically none.

The Necessity of Hard Fibrous Food.

One of the most universally practiced dietary habits which is bad from a dental standpoint is the use of soft foods to the exclusion of practically all food of a hard or fibrous nature; and this directly and indirectly has a vast influence on the lament-

able dental conditions today. The teeth must have vigorous use, and the oral tissues their needed amount of massage, in order to create and maintain health of the mouth. The action of hard foods in chewing is nature's system of cleaning and polishing the teeth and massaging the gums. It also creates a normal flow of saliva, and thus properly performs the first process of digestion. Many experiments have proved that lack of use of the teeth prevents normal development of the bones of the head and other parts of the body. The habit of washing down food with tea, milk, coffee or water not only prevents proper use of the teeth, but also prevents proper insalivation. No amount of artificial cleaning and polishing can entirely compensate for the lack of natural mastication, and the habit of taking liquids with foods is too well known to all, and from the dental standpoint is a most pernicious habit, especially among children. It often prevents them from learning, to the fullest extent, the proper mastication of food. Above all things, let the children be taught to use their teeth, and this can be taught by proper feeding. As a first aid in teaching proper mastication of food, I would suggest the elimination of the soft cereal and the handy cup of drink. How long a process is that of dentition, and how necessary it is, even from a purely moral standpoint, that children and young people be properly fed and nourished! Then, too, these good habits formed in youth will stick through life.

GEORGIA MEDICAL SOCIETY.

The regular meeting of the Society will be held in the Hall of the Georgia Medical Society on Tuesday, October 27, 1914, 9 p. m.

Program.

Paper, "The Injection of the Gasserian Ganglion Through the Foramen Ovale," by Dr. H. H. Martin.

Paper, "A Visit to the Murphy Clinic," by Dr. Charles Usher.

You are invited to attend.

V. H. BASSETT, M.D.,

Refreshments.

Secretary-Treasurer.

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Journal Medical Association of Georgia.

SESSION OF THE EIGHTH CONGRESSIONAL DISTRICT MEDICAL ASSOCIATION.

Athens, Ga., September 24.

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Vice-President—Dr. J. C. Proctor, Athens.
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Dr. Stewart Brown, Royston.

Entertainment Committee.

Dr. H. M. Fullilove, Chairman.
Dr. I. H. Goss Dr. S. S. Smith
Dr. D. H. Dupree

Program.

Session called to order 10:30 a. m. Eastern time, at the City Hall.
Opening Prayer—Rev. Dr. Grubb.
Address of Welcome—Mayor W. F. Dorsey.
Address of Welcome of Clarke County Medical Society—Dr. J. C. Bloomfield.
Reply to the Address of Welcome—Dr. J. R. Robins, Siloam.
Dr. J. C. McKinney, Athens—"Syphilis."
Dr. Jack Swafford, Athens—"Salvarsan."
Dr. J. I. Pitts, Newborn—"Tobacco, Coffee, Tea, in Their Relation to the Practice of Medicine."
Dr. John Hunnicutt, Athens—"Diagnosis and Treatment of Exophthalmic Goitre and Other Diseases of the Thyroid Gland."
Dr. Bernard Wolff, Atlanta—"Sexual Perversion in the Negro."
Dr. R. C. Wilson, Professor of Pharmacy, University of Georgia—"Prescriptions."
Dr. E. C. Thrash, Atlanta—"Heart Neuroses."
Maxie T. Summerlin, D.D.S., Athens—"Diet as a Means of Oral Prophylaxis."

Dr. W. B. Hardman, President Georgia Medical Association—"My Impressions of European Surgery."

Dr. H. I. Reynolds, Athens—"Rupture of the Perineum and Its Repair."

Dr. J. R. Robins, Siloam—"Medical Agnosticism."

Dr. W. W. Pilcher, Warrenton—Address.

Judge Grogan, Elberton—"Medical Jurisprudence."

Miss Mabel C. Lett—"Corsetry from a Medical Standpoint."

Barbecue at 2:30 p. m.

BOOK REVIEWS.

Work on Biological Therapeutics.

A book of interest and value to physicians has just been issued from the press of Parke, Davis & Co. It is a new "Manual of Biological Therapeutics," receipt of a copy of which is hereby acknowledged by the editor of this Journal. The book is handsomely printed in large, clear type, on heavy enameled paper, and bound in cloth. It contains 174 pages of text, upwards of thirty full-page plates in color, and a number of half-tone illustrations in black and white, together with a comprehensive index. As its title suggests, it is a concise and practical treatise on biological therapeutics, and so replete with useful information that no practitioner should miss the opportunity to secure a copy, especially in view of the fact that the publishers announce that the entire edition is to be distributed gratuitously to members of the medical profession. To our physician friends we suggest the propriety of writing at once for a copy of this "Manual of Biological Therapeutics," addressing the request to Parke, Davis & Co., at their home office in Detroit, Mich. It will not be amiss to mention this journal in writing.

The more money The Journal of the Medical Association of Georgia makes out of its advertisements the less it costs the State Association to run the paper. This means that every member of the State Association has an interest in the advertising columns. If one business firm advertises and another does not, patronize the one that does. It is money in your pocket.

THE JOURNAL

OF THE

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ANONYMOUS CONTRIBUTIONS, whether for publication, for information, or in the way of criticism, are consigned to the wastebasket unread.

NEWS: Our readers are requested to send us items of news of a medical nature, also marked copies of local newspapers containing matters of interest to physicians. We shall be glad to know the name of the sender in every instance.

SCHOOL HYGIENE.

The study of conditions surrounding school life which may injuriously affect the growth and development of the child, and proper appreciation of the influence of physical defects on the intellectual capacity of the young, have until quite recently received little consideration in this country. The first attempt to exercise medical supervision of schools in the United States was by the city of Boston, in 1894, for the purpose of controlling the contagious diseases of childhood. From this beginning, the movement has developed until now most of our cities maintain a more or less comprehensive supervision over school hygiene and the medical inspection

of school children is mandatory in a number of states and elective in some others.

In this respect we are considerably behind European countries, notably Germany and England, where the system of medical school supervision is more extensively developed, has been longer in operation and is practically national in character. That this is so is largely due to the fact that consideration of dirt, destitution and disease, has not been of such immediate importance with us, except in certain restricted areas.

School hygiene is a complex problem. Our knowledge of its principles is greatly in excess of their practical application. The position of school medical officer presupposes, in addition to thorough training in physiology and psychology, a practical working knowledge of the physics of heat, light and ventilation, and an ability to recognize and co-ordinate the physical condition and educational needs of the developing child.

The need of skilled services and the expense incident thereto have been instrumental in restricting the practice of school hygiene largely to urban communities. This is unfortunate, because the great bulk of the school population of this country is as yet scattered over the rural districts.

The disproportionate prevalence of preventable diseases among urban and rural populations is not great; the necessity, therefore, of educating rural communities to the exercise of sanitary precautions necessary for the preservation of health is apparent. The importance of school hygiene in this respect is paramount, because the sanitary redemption of the majority of rural communities must largely be brought about through the practical education of the young in orderliness, cleanliness and the observance of sanitary precautions. Furthermore, the medical inspection of school children is in more or less intimate relation with the homes, which in turn are component parts of communities. The educational effect of school hygiene extends through these channels for the betterment of the community health.

There is necessity for uniformity in methods of examination and of classifying the results for collective statistics to be of value. There is need of uniform methods and systematic classification of results before these observations can be of value in studying mental and physical standards, and the effect of changing social conditions on development.

The object of school hygiene, says The Journal of the American Medical Association, is to place the impressionable child in the most favorable environment for physical and mental development, and to detect and correct defects which may impede intellectual training. The medical supervision of schools may, however, be further utilized by the state in the determination of the prevalence of communicable diseases, especially in rural communities. The ultimate control of malaria, trachoma, tuberculosis and typhoid fever in these communities must be largely through educational methods. For these reasons the combination of the duties of the health officer with that of the medical supervision of schools appears eminently practicable.

Intensive studies of the mental capacity of American school children, at varying ages, should be undertaken in widely separated communities, with a view to the establishment of the normal mental standard, thereby rendering possible the study of the impress of immigration, and the effect of a changed social environment on the mental processes of the immigrant child, as revealed by similar examinations at the ports of entry.

THE WEARING OF GLASSES BY YOUNG PEOPLE.

It is apparent that more children are wearing glasses than used to be the case, and the question frequently occurs as to the cause of this state of affairs. Are children having too heavy demands made on them, or are glasses being ordered when there is no necessity for them? It is undoubtedly the fact that the average child nowadays has more schoolwork than formerly, and among all classes the eyes of the child are being used for near work to a greater extent than was the case a generation ago. During the growing period of the child, the outer envelope, or supporting tissue of the eyeball, does not attain its full degree of firmness and hardness, and any strain on the focussing muscles has a tendency to make the eyeball stretch. This stretching of the eyeball is really the condition which is commonly known as near-sightedness, and is caused in most instances by strain in reading. Many people believe that a child may be born near-sighted, but this is not the case. Near-sightedness always occurs from strain, and in the great majority of cases can be prevented, or

at least kept down to low degrees. It requires no special knowledge to appreciate the fact that a fiddle when stretched is weaker than before and is likely to go on stretching, and this is the danger in near-sighted eyes. Such eyes are apt to stretch and grow worse until the child attains its full growth, and the tissues have a chance to become hard and firm, hence, it is during the period of growth that damage to the eyes is most apt to occur. If the stretching of the eyeball goes beyond a certain point, the delicate nerve tissues inside the eye are apt to become stretched to an extent which they cannot stand, and tears and breaks occur in them with damage to the sight. These breaks cannot be remedied, nor for that matter can the eye when it is once stretched come back to its normal size. In very high degrees of stretching, even blindness may result. There is a current belief that nearsightedness runs in families, and this, while partly true, is really an unfortunate misconception. Certain families have softer tissues in the eye than others, and their eyes stretch more easily to a certain degree of strain. This should only make such people more cautious to avoid strain and does not by any means imply that it is necessary for such children to be near-sighted. The cause of this strain in the young child is astigmatism. There are other contributing causes, such as a too short eyeball, poor general health, which makes the tissues weaker and less resistant, and also the disposition of the child, some children preferring to sit and read all day rather than to go out and exercise in the open air. All these questions must receive proper attention if near-sightedness is to be prevented, but that astigmatism is the principal cause is well-known. This word is becoming rather familiar, and yet its meaning is constantly misunderstood. Many people suppose that astigmatism means a difference in the two eyes, which is entirely wrong. It is an irregularity of the front part of the eye where the curves should be symmetrical but are not. This irregularity or inequality of the curves makes objects appear blurred. Certain lines in the objects looked at seem fairly distinct while certain others are blurred, and this causes the eye to make strong muscular efforts to overcome the blur and get a perfectly clear image. The strain brought about to correct the astigmatic image leads to stiffness and cramps of the muscles with headaches, and in severe cases to an actual

stretching of the eyeball. The surest way to stop the ever-increasing dangers of near-sightedness is to correct astigmatism by means of properly fitting glasses during the growing period. Recently statistics show that in accordance with this method of treatment, near-sightedness is becoming less. Many children are obliged to wear glasses when reading or during the period of greatest strain, and if the astigmatism is of small amount, they can frequently lay aside the glasses when they have attained their full growth. The greatest amount of strain is during reading or sewing, or any use of the eyes for close work. It is, therefore, much better to allow the child to use glasses during the growing period, at least, and avoid strain, than it is to run the danger of developing a near-sightedness, which is a permanent condition, and which is apt to progress to a point of damaging the vision.

THE NATURE OF CANCER.

Its Local Beginning.

Cancer is almost invariably at first a local disease.

It is easily cured if promptly recognized and at once removed by competent treatment.

It is practically always incurable in its later stages.

The Danger Signs.

The disease usually begins in some unhealthy spot or some point of local irritation.

In external cancer there is something to be seen or felt, such as a wart, a mole, a lump or scab, or an unhealed wound or sore. Pain is rarely present.

Cancer inside the body is often recognized by symptoms before a lump can be seen or felt. Persistent indigestion, with loss of weight and change of color, is always especially suspicious.

Persistent abnormal discharge from any part of the body should arouse the suspicion of cancer, particularly if the discharge is bloody.

The early and hopeful stages of cancer are usually painless.

What You Should Do.

Fear the beginning of cancer.

Never be afraid to know the truth.

Any painless lump or sore appearing upon

your body should be examined by your physician.

By the time a cancer has become painful the best chance for its cure has passed.

But even a painful cancer can be removed permanently if it has not extended too far beyond the place where it began.

Seek Early Examination.

If you notice that a wart, mole or other "mark" begins to change in appearance or to show signs of irritation, go to a physician and have it completely removed. Do not wait until you are sure it is cancerous.

All lumps in the breast should be examined. In women the normal change of life does not lead to increased flowing, which is always suspicious, as is the return of flow in gafter it has stopped.

Medicine Useless.

Medicine which relieves pain does not have any effect upon the disease itself; it simply produces a period of freedom from discomfort and therefore delays the proper treatment.

A Menace to the Individual.

Cancer is of greater frequency at ages over forty than tuberculosis, pneumonia, typhoid fever, or digestive diseases.

At ages over forty one person in eleven dies of cancer.

One woman in eight and one man in fourteen over forty years of age is attacked by the disease with fatal results.

Largely because of public ignorance and neglect cancer now proves fatal in over 90% of the attacks.

A Menace to the Nation.

Of the 75,000 deaths from this disease in the United States in 1913, about 30,000 were deaths from cancer of the stomach and liver, 12,000 from cancer of the uterus and other organs of generation, 7,500 from cancer of the breast, and about 25,500 from cancer of other organs and parts.

A Menace to Society.

Cancer respects neither race, creed, nor social position.

It is the common enemy of all mankind, attacking rich and poor alike.

Its insidious onset occurs at the most useful period of life; and death is most common at the age when the care and guidance of

children and the continuance of business responsibilities make the mother and father the most useful members of society.

A Message of Hope.

The only cure for cancer is to remove every vestige of the disease.

The only sure way to do this is by a surgical operation.

If taken at the beginning, the majority of cases of cancer are curable.

All cases will end in death if let alone.

Records of our best hospitals prove that the chances of cure are very high with early operation, and that these chances decrease with every day of delay.

Early diagnosis is therefore all-important.

A National Campaign.

The American Society for the Control of Cancer is studying these hospital records and will spread nation-wide the message of courage and hope in early recognition and prompt operation.

By publishing circulars and articles in newspapers and magazines, and by organizing lectures and public meetings, this society is conducting a general campaign of education based on the latest knowledge of the disease.

Thoughtful and influential people can help this work by joining the society. Write to the office, 289 Fourth Avenue, New York City, for further information.

NEWS NOTES.

Ninth District Medical Society.

The Ninth District Medical Society met in Lawrenceville, September 16. The attendance was good. The Society had never met in this portion of the district before, and quite a number of those present were new faces. The papers read were all on practical topics and showed deep research on the part of the authors. The discussions were full and free and helpful to all present. One of the enjoyable features of the program was a talk by Dr. W. B. Hardman, giving a synopsis of his European trip. His report of the various clinics he attended and his graphic description of all the medical centers in the Old World were the next best thing to attending them yourself.

The next meeting of the Society will be

held in Gainesville third Wednesday in March, 1915.

The physicians of Lawrenceville and Gwinnett county were royal hosts. The dinner served at the Hotel Pharr was a most elegant repast, to which all present did ample justice.

A. D. WHITE, Secretary.

Twelfth District Medical Association.

A joint session of the Twelfth District Medical Association and the Ocmulgee Medical Society was held in Eastman in the rooms of the Commercial Club, on Monday, August 3. The meeting was an important one and was well attended by physicians in the neighborhood of Eastman. The officers of the meeting were, Dr. J. D. Herrman, Eastman, president, and Dr. E. C. Ryner, Summitt, Secretary. In the absence of Dr. Ryner, Dr. J. Cox Wall of Eastman acted as secretary pro tem for the meeting.

The program of the meeting was as follows:

Address of Welcome—Rev. W. E. Towsen, Eastman.

Response to Address of Welcome—Dr. Moy, Vidalia.

"Management and Treatment of Gastro-Enteric Diseases in Infants"—Dr. W. H. Peacock, Vidalia.

"Hiccoughs"—Dr. J. W. Palmer, Ailey.

"Rheumatism. Its Management and Cure"

"High Caloric Feeding in Typhoid Fever"—Dr. T. E. Walker, Cochran, Ga.

"Early Diagnosis and Treatment of Acute Appendicitis"—Dr. Franklin, Graymont.

After the business session the visiting physicians were entertained at a banquet given at the De Leitch Hotel by the Eastman Medical Society. Dr. J. D. Herrman of Eastman acted as toastmaster. Speeches were made by Drs. Weddington of Dublin, Moy of Vidalia, and several others. Forty members of the Association were present at the banquet.

The next meeting of the Ocmulgee Medical Society will be held at Hawkinsville in November, while the Twelfth District Association will hold their next session in Alamo in December.

An advertisement in The Journal of the Medical Association of Georgia will bring results. Rates sent on request.

NEW AND NON-OFFICIAL REMEDIES.

Since publication of New and Non-official Remedies, 1914, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Non-official Remedies."

Hepco Flour.—A flour prepared from the Soya bean. It is claimed that clinical trial has shown that the small percentage of carbohydrates in Hepco Flour is in the main not sugar-producing, and that it therefore is a suitable food material in cases in which carbohydrates are contraindicated, as in diabetes, amylaceous dyspepsia, etc. Hepco Flour is also sold in the form of biscuits as Hepco Dodgers and a granulated "breakfast food" as Hepco Grits. Waukesha Health Products Company, Waukesha, Wis. (Jour. A. M. A., Sept. 26, 1914, p. 1113.)

PROPAGANDA FOR REFORM.

Digalen Omitted from N. N. R.—In view of increased extravagance regarding the claims made for Digalen by the Hoffmann-LaRoche Chemical Works the Council on Pharmacy and Chemistry decided to investigate the present eligibility of Digalen. Examination demonstrated that the asserted presence in Digalen of "amorphous digitoxin" was not substantiated by evidence, that Digalen and Digalen Tablets were not constant in composition and action, and that the claim that Digalen causes less gastric disturbances than digitoxin was unfounded. While the manufacturer promised to hold the claim that Digalen contained "amorphous digitoxin" in abeyance, they refused to concede the variable composition of Digalen and reasserted that Digalen was less liable to cause gastric irritation than other digitalis preparations. In view of the overwhelming evidence that Digalen is variable in action and in composition and that it produces the same gastric disturbances as other digitalis preparations, the Council voted that Digalen and Digalen Tablets be omitted from N. N. R. (Jour. A. M. A., Sept. 5, 1914, p. 881.)

Dose of Diphtheria Antitoxin.—While 3,000 units, the dose given in the Pharmacopoeia, probably is a sufficient initial dose in many cases, this quantity is not enough to satisfy the factor of safety. There is a growing opinion that no case of diphtheria should receive less than 10,000 units as the initial dose. (Jour. A. M. A., Sept. 5, 1914, p. 873.)

Vaccination Against Smallpox and Typhoid.—In view of the war a general revaccination of the population of Paris has been ordered, and huge quantities of anti-typhoid serum have been prepared. (Jour. A. M. A., Sept. 5, 1914, p. 873.)

Angier's Emulsion.—A report of the Council on Pharmacy and Chemistry points out that when Angier's Emulsion, Angier Chemical Co., Boston, Mass., was first put on the market, it was advertised as a "food-medicine" and an "Ideal Substitute for Cod Liver Oil." Although the manufacturers now advertise this product as a laxative and state it to be "purely mechanical in its action" they still mingle with the new ones the old claim of "tonic and reconstructive merits" and thus attempt to perpetuate the erroneous belief that the preparation has nutritive value. As to the identity of the petroleum product contained in the preparation, regarding which the advertising circulars make contradictory statements, the A. M. A. chemical laboratory reports that this has all the properties of soft yellow petrolatum. (Jour. A. M. A., Sept. 12, 1914, p. 962.)

Angier's Throat Tablets.—These tablets are stated to be composed essentially of elm bark and petroleum and yet are claimed to "promote appetite and aid digestion." The A. M. A. Chemical Laboratory reports the tablets to contain about 12% of soft yellow petrolatum, like that found in Angier's Emulsion. (Jour. A. M. A., Sept. 12, 1914, p. 964.)

Antiseptic Action of Hexamethylenamin.—The former opinion that hexamethylenamin possesses antiseptic action independently of the liberation of formaldehyd was an assumption not founded on reliable experimental evidence. The recent investigations of Burnam, Hanzlik and others have shown that its action as an antiseptic depends on the decomposition into formaldehyd and ammonia which occurs only in an acid medium. (Jour. A. M. A., Sept. 12, 1914, p. 962.)

Vaccine Virus not Contaminated.—A study of cases shows that vaccinal tetanus is not due to contaminated vaccine virus. Further, since the law regulating the sale of biologic products in 1902 went into effect, there have been examined in the Hygienic Laboratory of the United States Public Health Service over 1,500,000 doses of vaccine virus without a single specimen having been found to contain tetanus spores. Also, experiments indicate that tetanus will not be produced even if the virus used contain tetanus spores. Most cases of vaccinal tetanus are due to infection after vaccination. (Jour. A. M. A., Sept. 19, 1914, p. 1032.)

Sodium versus Potassium Salts.—The probable shortage of potassium salts due to the war suggests that sodium salts may in most cases be substituted without disadvantage. In general potassium salts have no marked superiority over the corresponding sodium salts. While the potassium compounds are said to be more active and to possess a more diuretic effect, the sodium salts are less depressing to the heart and in some instances less disagreeable to the taste. Sodium iodide, sodium bromide, sodium citrate, etc., are just as effective as the corresponding potassium salts. (Jour. A. M. A., Sept. 19, 1914, p. 1034.)

Sanatogen.—Testimonials for Sanatogen are published which show good results in cerebral concussion, alcoholic gastritis anemia, etc. The patient is given a chance to recover by rest, a proper diet and Sanatogen—and the recovery is attributed to Sanatogen. Based on some biologic experiments the exploiters of Sanatogen assert that "Sanatogen acts as a strong stimulus as far as the recuperative powers of the blood are concerned." These experiments were repeated by Professor A. J. Carlson of the University of Chicago, using Sanatogen, casein, casein and glycerophosphates, milk, and crackers and milk. Prof. Carlson's experiments show that the effects produced by Sanatogen are not different from those obtained when casein, casein and glycerophosphates, milk, and crackers and milk are used. (Jour. A. M. A., Sept. 26, 1914, p. 1127.)

Value of Talcum Powders.—The action of talcum powders on the skin depends on their protective and dehydrating properties. On the other hand, they tend to form crusts and pastes, due to mixture of the powder with sweat or other secretions. There is no doubt if the boric acid in talcum powders can exert any antiseptic action. The action of the salicylated talcum powder of the National Formulary, though containing 10% of boric acid, depends on its salicylid acid. Commercial talcum powders contain small amounts of various antiseptics and perfuming agents, and have little value from a therapeutic point of view. (Jour. A. M. A., Sept. 26, 1914, p. 1129.)

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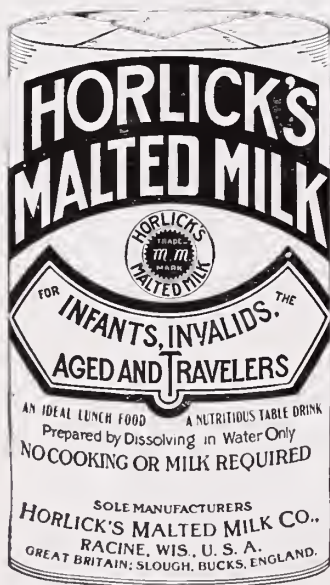
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No. 7

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CEREBRO-SPINAL SYPHILIS.*

W. R. Houston, M.D., Augusta, Ga.

It is only a few years since syphilis was looked upon as a disease that was most appropriately studied from the standpoint of the dermatologist. A discussion of its course was to be found in books dealing with dermatology, with genito-urinary diseases, with general surgery, in fact, while in the current texts devoted to general medicine, syphilis was referred to only from the standpoint of etiology or differential diagnosis. The diagnostic refinements that the past decade has brought, the demonstration of the *Spirachaeta pallida*, and the introduction of the Wassermann test, the studies of the cerebro-spinal fluid have brought us to quite another viewpoint with regard to this disease both as to its diagnosis and as to its treatment.

In the first place, we no longer await the development of lesions in the skin and mucous membranes to institute treatment. The objection can be no longer urged against a successful course of therapeutics instituted during the initial period, that the diagnosis may have been incorrect and that the initial

symptoms had not been really syphilitic in character.

Second. Until the advent of the Wassermann test, we were unable definitely to recognize as syphilitic many lesions of the aorta, liver or cerebro-spinal axis, unless by chance there happened to be an association some time during the source of the malady with symptoms of dermatological character. The stumbling application of the therapeutic test carried out often in an ineffectual or half-hearted fashion was our only resource many times for coming to a correct opinion. The many cases in which at no time during the course of the disease lesions appeared in the skin or mucous membranes went formerly unrecognized. Today, when even by the dermatologist this group has been clearly recognized under the name of a symptomatic active lues, there is still a tendency to regard the disease as latent unless the skin lesions be present. To think that these cases are benign or inactive because no skin lesions are present is a conception that is wholly erroneous.

Syphilis is an infectious disease of the most general kind in which no greater significance is to be attached to the presence of the exanthem than perhaps to the presence of the exanthem in typhoid fever. There

*Read at meeting of Medical Association of Georgia, Atlanta, Ga., 1914.

are many cases of syphilis which exhibit a frequently recurrent eruption in the skin and mucous membranes. There are those that show only once a transient exanthem, and there are still others that never exhibit any symptoms in the skin or mucous membrane. The patients belonging to the last group have none the less an active infection. They may, as well as the other syphilitic, acquire later an aneurysm or a tabes.

The third great advance in refining our diagnosis of syphilis has come from the study of the cerebro-spinal fluid. It was once a matter of comment that even very mild cases of syphilis, quite as well as the severer forms, might exhibit later tabetic degeneration in the cord. What, however, proved that these cases were mild? Merely the circumstance that they showed few red spots on the skin. There were serious and demonstrable manifestations in the meninges probably present which only failed of recognition because the cerebro-spinal fluid was not studied. Today where we investigate the spinal fluid in the early secondary stage, we find that in from fifty to eighty per cent of cases, often even at the time of the first eruption, there is evidence of a secondary meningitis. A meningitis, which does not offer the symptoms of gummatous meningitis, one which clinically indeed generally provokes no symptoms at all, and which, therefore, escapes observation if not sought for. Only the examination of the cerebro-spinal fluid can enable us to distinguish mild from severe cases of syphilis so far as the ultimate fate of the nervous system is concerned. While we must recognize the great service that dermatological considerations have afforded in the past to our differential diagnosis, we have come to the point where we must emancipate ourselves from the leadstrings of the dermatologists in estimating the severity of the infection in an indication for treatment.

Syphilis is a disease that belongs to the domain of internal medicine. It is a spirochaetosis of the whole organism. We can no better afford to be guided in our estimate of the severity of an infection by the severity of the skin symptoms than we could afford to estimate the severity of a typhoid infection by the number of rose spots.

If we recall our earlier teachings as to the relation of tabes or paresis to syphilis, we will remember that syphilis was mentioned as an important predisposing cause. It was stated, however, that from twenty-five to

thirty-five per cent of the cases observed gave no positive syphilitic history, and showed no evidences of syphilis. Since we now know that the presence of this disease in itself furnishes complete evidence of the existence of an antecedent active syphilitic infection, we can certainly deduce from these figures this conclusion, that a large proportion of cases go through the early stages of the disease without sufficient external manifestations to attract attention. It is by no means necessary, as we now know, to score the patient's denial to the account of mendacity. The initial lesion may have been extra-genital or intra-urethral, the skin lesions may have been insignificant or absent. In any case, we may lay it down as a general law that in the presence of premature degenerative changes in the cerebro-spinal axis or elsewhere, we should, despite the absence of a syphilitic history, and despite the absence of characteristic changes in the bones or elsewhere, make an examination of the blood and it may be of the cerebro-spinal fluid.

The first important question that arises in a patient presenting symptoms referable to the nervous system is the question whether we are dealing with a functional disorder or with an organic disorder. If it be shown that the disorder is organic, the second major classification will always be into luetic and non-luetic diseases. To decide this question in the past, recourse was often had to the so-called therapeutic tests, but in how far this test was carried out without vigor and without conviction is readily to be seen in the therapeutic successes that are now achieved in cases that formally were regarded either as non-specific or specific only in etiology and not in essence.

I shall not attempt to refer to the mass of details both of pathology and symptomatology which serve to aid us in arriving at conclusions as to the specific nature of a given symptom complex. I wish at this time only to call attention to the value of an examination of the cerebro-spinal fluid in determining the question of the luetic or non-luetic nature of a cerebro-spinal lesion.

The facts at present before us seem certainly to justify the dictum of Weehselmann that no case of early syphilis should be dismissed without an investigation of the cerebro-spinal fluid to determine the question whether the negative Wassermann of the blood is accompanied by negative find-

ings in the fluid. The not infrequent presence of a positive Wassermann in the fluid after the blood is already negative is only one of the evidences that the conditions of distribution of biological as well as chemical substances is not identical for the dorsal and ventral cavities. However, with the relatively small incidence of grave cerebro-spinal syphilis relative to the total number of infections, and with the unpleasantness connected with the spinal puncture for the patient, this technique has not as yet come into general use.

With the presence of the cerebro-spinal symptoms, however, the procedure must be regarded as indispensable. Having obtained the fluid, we are to consider its study and interpretation in the light of the so-called four reactions; the cell count, the globulin test, the Wassermann on the fluid and on the blood. The value of the first two reactions may fairly be compared to the value of an examination of the urine for albumin and casts in the diagnosis of nephritis. While a hypertrophied left ventricle, very high blood pressure, and nocturnal polyuria are symptoms that suffice for the diagnosis of interstitial nephritis, and while the results of urinary examination, if taken alone, may prove insufficient or even misleading, we rarely feel satisfied to rest our diagnosis without an examination of the urine. In doubtful cases, the examination of the urine may indeed prove to be the deciding symptom in completing our diagnosis. So the examination of the spinal fluid for its cell and globulin content will in any case serve to deepen and confirm our conception of a given case and will often prove of deciding value in establishing the diagnosis. These laboratory methods, like all laboratory methods, are to be interpreted in the light of clinical findings. We cannot go to the laboratory and expect there to have given us an indubitable diagnosis that will spare us the trouble of thinking. What we get from these examinations is an enormous enlargement of the data upon which we base our conclusions. By the aid of these tests and taken in conjunction with Wassermann thoughtfully interpreted, it becomes possible to recognize paresis at the stage where it is hardly to be distinguished from neurasthenia or from mania, and it is perhaps in the early recognition of these meta-syphilitic diseases that the tests afford the most brilliant service.

I may cite for my service in the University Hospital. The patient, a robust looking one-

armed man, age 42, presented a clinical picture most suggestive of general paralysis, mentally he showed failure of memory, megalomania, euphoria, much garrulity and impudence. He had marked ataxia of the hand and lower extremities, absent knee jerks and bladder symptoms. The Wassermann on the blood was positive, and the case seemed almost closed as the case of tabo-paralysis. The examination of the spinal fluid, however, showed a normal cell count, and negative globulin, and negative Wassermann on the fluid. Through this we were led to a correct diagnosis of Korsakow's psychosis, with ataxia neuritis and the ultimate course of the case terminating in recovery proved the correctness of the diagnosis. The therapeutic successes that rest on these diagnostic refinements and on the use of salvarsan in this class of cases have proved most encouraging. We may now feel that most cases of tabes are capable of being arrested and enormous improvements made in the symptoms in a large majority of cases.

It is not possible by means of the test to distinguish sharply between the metasymphilitic diseases and cerebro-spinal syphilis in the sense of an endarteritis or a gummatous meningitis. In a general way it may be said that all four tests are apt to fall most strongly positive in general paralysis. The reactions are less constant and weaker in tabes and yet more inconstant and weaker in cerebro-spinal syphilis. The tests are particularly apt to be negative in Erb's symptom complex characterized pathologically by myelomalacia of the lower cord.

As regards the treatment of cerebro-spinal syphilis, it goes without saying that it must be of the most energetic. The limit of dosage should be the limit of the patient's tolerance for the specific drugs. The time for relaxing the vigor of the treatment is to be determined by the disappearance of the four reactions rather than by the disappearance of the clinical symptoms. Irreparable damage may have taken place if we wait for the recrudescence of symptoms. The use of Swift and Ellis' technique for the topical application of salvarsanized serum is yet under discussion. The reports, so far, seem to indicate that as good temporary results clinically are obtained by the intravenous use of salvarsan, but that the reactions in the fluid are not altered by the administration of the salvarsan into the blood as they are by the local applications. Many interesting theo-

retical considerations suggest themselves when we come to consider which plan of treatment we shall pursue, but it would be idle to dwell upon them until further experimental tests have been made. It may turn out to be true that amounts of salvarsan equivalent to that contained in the salvarsanized serum may be injected into the cord without danger, and this will enable us to decide definitely as to the effect of the presence of salvarsan in the fluid on the tissue changes. At all events the striking therapeutic successes achieved in what was formerly so intractable a disease as tabes, encourages us to unusual efforts in the employment of every aid in securing an early and accurate diagnosis. With increased ability to cure the disease goes increased obligation to recognize it in time.

DISCUSSION OF DR. HOUSTON'S PAPER.

Dr. L. M. Gaines, Atlanta: I have been much interested in the subject of cerebro-spinal syphilis, and I wish to discuss Dr. Houston's paper.

Syphilis manifests itself in the nervous system in a great variety of ways. In fact we know, since the introduction of the tests for syphilis, it manifests itself in probably a great many more ways than was once supposed. Take, for instance, in the brain. We have syphilis affecting the arterial system in the brain and so produce a certain set of clinical symptoms or gummata formed in various portions of the brain in such cases we may have symptoms indicating tumor or pressure, or we may get meningitis which affects the vertex or as is more common perhaps the base of the brain, producing syphilitic basal meningitis, in which we get particularly cranial nerve disturbances, or we may get the cord affected, either the arterial supply or the gummatus infections which are rare, or the meningitic inflammations of a syphilitic nature, or we may get a combination of the two, both cord and brain, and it is to be remembered we do not stop here, but also we may get as previously designated parasyphilitic conditions, such as tabes and paresis, conditions which formerly had many pages in our text-books devoted to them trying to elucidate the etiology, and which we now believe without question are always syphilitic. Furthermore, we have such disturbances as epilepsy, which was formerly considered a purely functional disturbance

of the nervous system, and epilepsy was sooner or later in some cases thought to be entirely syphilitic. So I thoroughly agree in the separation particularly of the organic nervous diseases into syphilitic and non-syphilitic, and it is very important to ascertain in a given case whether it is syphilitic or non-syphilitic. It is impossible to do that by the history or by the examination. A large percentage of cases are unable to give any definite history of syphilis, even if we find out it is syphilis. Such cases we see daily, and so it narrows itself down to the employment of laboratory tests which have come into such general use. I wish to draw attention to this fact that the Wassermann test as done on the blood when negative is of no value in deciding the case to be non-syphilitic. That is only the starting point of our investigation. It is of the greatest importance to examine the cerebro-spinal fluid. I think it is just as important in any obscure or doubtful case of nervous disease to do a lumbar puncture and examine the fluid, which is just as important. The results which we get are often surprising. Cases which we get and thought by most to have had syphilis we find to be syphilitic.

Just a word about treatment. I think there is a general impression that if a case is syphilitic, that all he needs is anti-syphilitic treatment, and the prognosis is very much better than if something else is given. That, however, is not by any means always true. Particularly in the arterio-syphilitic disturbances there is probably no, if any, effect from anti-syphilitic treatment, and furthermore, the use of the ordinary anti-syphilitic remedies, such as mercury and the iodids, as I find they are usually prescribed, is of very little value. A patient is frequently given iodid of potassium in large doses and nothing else whatever. That is practically of no value. And then to some patients are given pills of protiodid and nothing else, or that and iodid of potassium, and it is not unusual to find some cases that make no progress toward recovery until put on mercury up to the point of toleration, or upon the use of salvarsan either intravenously or possibly by some other technique which is still under advisement.

Dr. W. J. Cranston, Milledgeville: I noticed Dr. Houston mentioned the advisability of using salvarsan direct into the spinal canal rather than into the form of salvarsanized serum. Lorenz, of Mendota, Wisconsin,

shortly after the Swiss-Ellis method of using salvarsanized serum, gave the salvarsanized serum to a number of cases, and he had such a severe reaction that he was really afraid to continue the use of it, and he used very small quantities of neosalvarsan direct into the canal, getting better results with decidedly less reaction than with the salvarsanized serum.

ARTIFICIAL PNEUMOTHORAX.*

E. C. Thrash, M.D., Atlanta, Ga.

Pneumothorax was first mentioned as a therapeutic agent for diseases of the lungs in 1831 by Carson of Liverpool. He made a number of experiments on animals by compressing the lungs and taking notations of the results. Nothing of value came of this. In 1882 Forlanini of Padua did a few operations upon the lungs of tuberculosis patients by attempting to obliterate the cavities by producing artificial pneumothorax. This method of treatment, however, was looked upon with but little favor until Murphy in 1898 read a paper on this subject before the American Medical Association, which attracted general attention. This method of treatment is now being practiced throughout the world with more or less favorable results, and the man who did more than any other towards popularizing it was John B. Murphy of Chicago. Throughout all its trials while passing through the experimental stage, Murphy stood by it, practiced it, defended it, until he has seen it develop into one of the standard treatments for tuberculosis, yet the medical profession generally have only a vague idea of how, why and when it should be done.

In properly selected cases there is no longer a question concerning its efficacy. It is not a treatment that should be used indiscriminately in all cases, and there is no treatment which requires so careful diagnosis and so thorough comprehension of the pathological conditions before it is instituted, as this. The reason is on account of the fact that one lung is put completely out of commission, and we do not wish to do this except when there is a burning need for it and the physiological condition of the other lung is such that it will take care of the oxygenation without the aid of its fellow. Benefits

result from pneumothorax on account of compression of the lung, placing it completely at rest so that repair may take place. As long as the vesicles are continuously expanding and contracting, keeping the lung constantly in a state of motion, exudation and infiltration will be disturbed. While it is necessary to have the lung at rest while repair is taking place, it is also necessary that after the healing process is more or less complete that the lung be able to again functionate. Otherwise this tissue would be a defenseless, degenerated area, that would invite the invasion of all forms of infection. So one must be on the alert, "while steering clear of Scylla to watch out for the whirlpool of Charybdis."

The indications for the administration of this treatment are variable and one must learn them from experience. It is the usual custom to resort to it only when there is an involvement of one lung while the other is not involved or only slightly so.

When the writer first began to compress the lungs, only cases were selected where the disease was moderately or far advanced, or where there were recurrent hemorrhages. But with more experience it was found that late incipient cases were cured by this method and its benefits were more apparent than in the second and third stages. It should be used in incipient cases where other means fail and the patient continues to decline under the classic methods of treatment. Then the pneumothorax may change the rapidly declining case into a convalescent one and the patient get entirely well.

Where there are large cavities or multiple small ones, with ulcerations, infiltrations and consolidations and with one lung good or fairly so, this method with open air and nutrition is the one that will produce best results. Where there is a tendency to hemorrhage, with them recurring from time to time and from week to week, the only question to decide is, which lung is bleeding, and pneumothorax is eminently urgent and offers the best means of relief at our hands. The slight involvement of the better lung does not preclude the use of this treatment, but for some reason, inexplicable, it is said that this slightly involved lung that has not been treated, will improve. I must say, however, that this is contrary to my experience. I have seen a lung that was only slightly affected grow worse after pneumothorax. In other instances it remains apparently un-

*Read at meeting of Medical Association of Georgia, Atlanta, Ga., 1914.

changed, but I noted no instance where the improvement on the untreated one was more rapid than prior to treatment except that resulting from the general systematic improvement that takes place from curing or benefitting the crippled lung. Murphy's experience is that both the treated and untreated lungs improve, and he often treats the worse lung first and later the one slightly affected. I have never attempted a procedure of this kind and am inclined to doubt its advisability.

The contra-indications to inflating the pleurae are uncompensated heart lesions, for advanced cases of tuberculosis, profound toxemia, hydro-thorax empyema and general adhesion of the lungs to the chest walls. Elderly persons seem to tolerate this treatment more poorly than younger ones and the results are not so good. The dangers are few and with proper technique they are negligible. The principal ones are: (a) Gas embolli of the intercostal veins, to be avoided by always having the needle through the chest wall before any gas is allowed to flow; (b) Dyspnoea, both from the compression of the lung treated and the pressure on the untreated lung, through the mediastinal space, which can be overcome by producing a negative pressure with the apparatus and allowing the gas to flow out; (c) Forcing the gas into the tissues by not having the needle within the pleural cavity and bringing too much pressure to bear upon the gas before the location of the point of the needle is known. All these can be obviated by the proper technique; and with the apparatus which I have devised, properly used, one should scarcely encounter any of these dangers.

I have devised an apparatus which I consider the simplest, safest and most practical of any that has yet been constructed. It is so compact that it can be carried around from house to house, just as one would take a grip. It has its own gas generator. The pressure is so graduated that it can be made either negative or raised to any amount up to about one-half pound to the square inch of surface. The manometer is graduated into centimeters and each centimeter registered represents about one-quarter of an ounce pressure, so that one can easily see the amount he is bringing to bear. It is unwise to bring any pressure to bear until the needle is known to be between the two layers of pleura and then there should be a very slight amount. There

is never need for more than one-half ounce or one ounce to the square inch to force the gas into the cavity, sufficiently to compress the lung.

In doing an operation, one proceeds as follows: The point at which the needle is to be introduced is selected and is usually between the fifth and sixth, or sixth and seventh ribs, just posterior to the mid-axillary line. This area is scrubbed off with lysol or some similar preparation, painted with iodine and with the patient lying on his side, either with a pillow under his chest or something that will bow the chest upward. This throws the ribs slightly apart so that the needle will not strike the margins in passing through the walls. Quite a number of needles have been devised especially for this purpose, but I have never found one any better than the small, blunt pointed aspirating needle. After being sterilized it is thrust carefully in and you can feel the resistance cease as the point of the needle passes through the parietal layer of the pleura. When you feel pretty sure that this has taken place, attach the tube of the apparatus to the needle with the gas still turned off. This tube is connected to the gas container and the manometer through the "Y" shown in the cut. The patient is then allowed to breathe deeply or to cough and the column of fluid in the manometer will be seen to oscillate up and down. Often, though, if there are adhesions, this will not take place, although the needle may be in the proper position. If no oscillation is shown the needle should be plunged deeper or retracted. Watch the manometer carefully, noting whether or not there are oscillations. After due manipulation if no oscillations are observed, the gas may be turned on with a very slight positive pressure and allowed to flow for just a few seconds. The patient is again advised to breathe deeply and to cough. If you still get no response from the manometer, you either failed to get the needle in the pleural cavity or the lumen is plugged and there is a complete cementing of the two pleurae together at this point, so the needle must be withdrawn and another point selected and proceed as before. It is quite exceptional when one cannot find some place where the gas can be made to flow freely.

On account of the arrangement of this apparatus it is impossible to get gas oedema in the tissues if the proper precautions are used

because the pressure is not great enough to overcome the resistance of the tissues and to allow the gas to escape into them. In devising this apparatus effort was made to make it proof against this danger. When the gas begins to flow freely one reads from the graduated gas jar the point at which the fluid stands. The gas is then allowed to flow slowly until the amount wished is introduced. Unless there is some tendency to disturb the respiration something like 500 to 700 c.c. should be administered at the first sitting. After an interval of three or four days the treatment is repeated, giving this time, if there was no inconvenience in the last treatment, something like 750 to 1,000 c.c. Then within a week the third treatment is given and from 1,000 to 1,500 c.c. is administered, provided there is no disturbance of the respiration and the patient is comfortable. This will usually produce complete compression of the lungs, but the treatment should be repeated at intervals of ten days to two weeks on account of the fact that the gas is slowly absorbed. From 500 to 1,000 c.c. is administered at these intervals which keeps the lung in a collapsed state. The periods of treatment are lengthened from time to time until the time arrives for the lung to be allowed to have freedom, after which they are stopped.

The complete absorption of the gas requires a period of one to two months, and the air cells which have not been destroyed by tuberculous processes and fibrous tissue infiltration are opened up and respiration is restored to normal.

Quite a number of post mortems have been done after the lungs have been compressed for a long period of time and well marked processes of repair have been noted. Small tubercular areas become encapsulated and some of them become infiltrated with lime deposits, the cavities undergoing granulation and the two adjacent surfaces become adherent, many of them closing completely, the ulcerative and infiltrated areas undergo fibrosis and the lung in every way shows general improvement. It is possible for complete repair of the lung to take place, though in the writer's opinion this rarely, if ever, occurs in moderately and far advanced cases. There is only arrest of the active processes.

From a clinical standpoint the patient's temperature, after being treated, begins to run lower, the toxemia becomes lessened, the amount of sputum is changed in appearance

and lessened in quantity, the patient's appetite improves, he gains in weight and in every way shows improvement, in well selected cases. This procedure is not specific for pulmonary tuberculosis, but our means for handling this disease are so limited and we can do so little in bringing about permanent and complete cures that it behooves us to avail ourselves of all the resources within our reach to bring comfort, health and happiness to these poor sufferers.

The public has been too much imbued with the thought that nothing benefits tuberculosis except fresh air, food and rest. This slogan, no doubt, has done more harm than all the work for the prevention of tuberculosis has done good. It seems that the whole world is centered upon the one thought that no treatment will do tuberculosis any good. We seem to lose sight of the fact that this applies not only to tuberculosis but to typhoid fever, the eruptive fevers, pneumonia, whooping cough, blood poison, nephritis, cirrhosis of the liver, rheumatism, heart lesions, arterio-sclerosis, pellagra, and in fact all diseases except a limited number that I might count on the fingers of one hand. Just as in the treatment of all of these pathological conditions for which we have no specific, so in this case, we should avail ourselves of drugs, vaccines, tuberculins, mechanical means, pneumothorax, and whatever else may aid us in bringing about a cure. There are more cases than have been infected by tuberculosis who get well than most other infectious diseases of which we know, although the contrary of this is thought to be true. While no far advanced case of tuberculosis ever gets well, yet more than 90% of the incipient cases, properly treated, get permanently well and a large percentage of the moderately advanced ones recover. It is just as absurd to say that treatment is of no avail in tuberculosis as to say the same in regard to typhoid and other of the infectious diseases. There is no malady that necessitates the care of the physician any more and requires so great skill on the part of that physician than tuberculosis.

DISCUSSION OF DR. THRASH'S PAPER.

Dr. S. T. Harris, Atlanta: I wish to congratulate Dr. Thrash on his beautiful demonstration of a method in producing pneumothorax. Possibly, as a great many of you know, I have been interested in this method

for some years past. In fact I have almost devoted my whole time to it for over three years. During that time I suppose I have given 4,000 treatments.

In regard to Dr. Thrash's apparatus, I would like to say it is very ingenious and it is excellent. There is one thing about his apparatus and all apparatuses which are being used, which I think is wrong, and that is the use of open manometers for gauging pressure. It has been demonstrated that while trying to take pressure you are liable to get aspiration embolism. I have had this occur in cases of my own, and for that reason the open manometer is wrong. The manometer for gauging pressure should be based on the lines of the aneroid with closed diaphragm and pressure transmitted through that, and by that means you are not liable to get embolism, which is one great danger in the production of artificial pneumothorax. I have had a case of embolism at one time and gauged the measurement on the manometer.

With regard to the oscillations of the manometer, by the time you get four centimeters of gas, the patient almost has a fatal embolism. In this apparatus Dr. Thrash uses his chemical, etc., and there is another form of apparatus in which you get nitrogen by burning oxygen. With potassium oxid it gives a chemically pure nitrogen and is reliable and simple.

As to the statement Dr. Thrash made in regard to knowing when you are in the pleural cavity, the oscillations being a criterion, it does not hold as being true, but it is not always the case. You can get oscillations from your respiratory movements with the point of the needle in the cavity, and you can get decided oscillations. In determining as to whether your oscillations are truly indicative of being within the pleural cavity, it rests upon this point: In the taking of a deep inspiration your pressure will decrease if the needle is in the lung or pleural cavity. If you continue your inspiration, if the needle is within the lung cavity, your pressure will begin to rise and the converse is true by forced respiration. If you are within the lung cavity at first you get a downward pressure of the manometer, but by continued effort of expiration your manometer will rise.

In regard to the use of this method in varying cases, I would like to say that we get the best results from incipient cases. It

is applicable to any case where you can produce it, where the trouble is confined practically to one lung.

Dr. Thrash, in Closing: In regard to the manometer, I have found this instrument to be satisfactory. I am not in a position to say whether it is the open or closed manometer that gives the best results. I cannot say nor see where one would have advantage over the other, but, however that may be, I have gotten along with this fairly well. It is impossible in a short discussion like this to enter into details and refer to the various obstacles that may arise. They are legion. There are a great many things that occur, and what I attempted to do was to outline a plan and one's experience will enable him to get around the obstacles. Any man with ordinary intelligence can administer this treatment. It is not a treatment that is difficult to administer, but I do want to say the difficulty comes in knowing when to administer it, because tuberculosis is so interesting and the pathological conditions lack so much the corresponding accuracy of your physical findings, that you may make a mistake in thinking you have got one class of tuberculosis when you have another. You may have both lungs far advanced in the disease, but think only one lung is moderately advanced. The lung may be ulcerated and still cavities form where there are no physical signs at all.

One thing to be avoided is in giving this treatment in cardiac lesions. Where there is a broken compensation and heart lesions, I doubt if it would be prudent to use this means of treating tuberculosis. Something else should be resorted to.

As to getting the needle into the cavity, that is possible. You can do no harm in doing this. You are perfectly safe within the cavity. You can let the gas flow all day and it will pass on out. You will not know whether it is in the cavity or pleural cavity or cavity of the lung from ulcerative processes. The only way to find out is to see you will not get inflation. Give 500 c.c., you can wait and percuss and see if there is any inflation, and you will think you are in the cavity, and in the next treatment you will get within the pleural cavity and the work will go on with ease and you have no further trouble.

Dr. Harris is right in saying we get the best results in incipient cases. Dr. Murphy

has been compressing both lungs in the incipient cases. He treats the worst lung first, and after that is fairly well repaired he gives treatment to the other lung. I doubt its efficacy. I shall not adopt that plan until further experimentation takes place along this line, because it is all right when you put one lung out of commission, but when you put both out of commission, you are getting pretty close to where a man lives.

HEADACHES.*

Will H. Malone, M.D., Marietta, Ga.

Headache is the most common subjective symptom that the physician meets in dealing with disease, as it occurs in nearly all pathological conditions and in certain diseases it is not only the chief symptom, but constitutes practically all that is known about them. Yet in spite of the great amount of experimental research and clinical data, there is wide diversity of opinion as to the actual seat of the pain experienced.

In any study of headaches it appears pertinent first of all to consider the question: In which portion or portions of the central and peripheral nervous system can the pain originate which we refer to the interior of the skull and include under the general term of headache; and to what primary cause is it referable, which in so many diverse conditions can produce this pain?

It will be agreed by all, that at this time, while the etiology of so many diseases remain in doubt, that it is impossible to give an accurate and precise scientific answer to this question. However, we do know beyond doubt that all headaches are perceived in the region supplied by the trigeminus and of the sensory branches of the upper cervical nerves.

Of the meninges of the brain, the dura only has a sensory nerve supply. The arachnoid and the pia mater have none except a few sympathetic fibers that ramify with the blood vessels. That portion of the dura which is found in the vault of the skull, appears to be without sensory nerves, for in operations it can be cut or torn with impunity and cause no pain. As we proceed towards the base, however, we find the dura becoming progressively more and more supplied with sensory fibers, coming mainly

from the fifth, but a few arising from the tenth cranial. The structure of the brain itself has been proven time and again to be without sensation, although headaches, of course, like every other pain, are appreciated by the cortex.

We are, therefore, forced to the conclusion that the pain felt in the interior of the skull and designated as headache, must be the result of irritation of the dural branch of the trigeminal nerve.

The primary cause or causes of irritation of these nerves may be classified as physical or chemical. Under physical causes we have those due to increased intracranial pressure, to nutritional disturbances arising mainly from vaso motor influences, and also to thermic, electric and especially optic stimuli. There are many chemical irritants of these nerves, as: The toxins which are constant accompaniment of febrile disorders, enterotoxins absorbed from the bowels during constipation, unknown metabolic products which are retained in the body in nephritis, and many chemicals of which alcohol, ether and nitroglycerin are fair examples. The headaches caused by both these organic and inorganic poisons are produced in various ways; some attack the sensory nerves in the dura directly, others, as nitroglycerin, increase the intra cerebral pressure by vascular paresis, and still others, as lead, may cause a painful cramp of the innervated muscles of the arteries. The headache of physical and mental exertion, and emotional disturbances, may possibly be brought about, in addition to the hyperemia, by an irritant action of the so-called fatigue-toxins on the brain and its meninges. Finally, it should not be forgotten that both physical and mental causes may interact to produce certain varieties.

Headache constitutes a large share of human suffering and varies from a dull disagreeable ache to sharpest agony. It may be continuous, lasting for days, weeks or months, without interruption, or it may only be of passing moment and the patient barely notices it. In some cases it maintains an uniform severity throughout, while in others it partakes more of a paroxysmal character. Only a small portion of the head may be affected or it may travel from place to place and eventually involve the entire cranium. There are many terms employed by patients to characterize the pain of headache, as, dull, sharp, snapping, and boring or splitting pain.

*Read at meeting of Medical Association of Georgia, Atlanta, Ga., 1914.

Very frequently the scalp is tender to the touch and such simple movements as brushing or combing the hair may be exquisitely painful.

There is a tendency among the medical profession as well as among the laity, to look on headache as only a minor ailment, and this is a serious mistake. While the great majority of headaches never amount to anything, every case should be regarded as a problem of importance, until it is proven beyond doubt that it is not the beginning of some serious acute or chronic disease. The personal history should always be taken and a careful physical examination made. Headache may be a comparatively independent affection throughout the greater portion of life, and while it may sensibly prejudice the enjoyment of existence, and interfere in no small degree with the capacity for work, nevertheless it is in this form no dangerous condition or in any way threatening to life.

There have probably been as many classifications of headache as there have been writers on the subject, none of which have been wholly satisfactory. The most commonly accepted classification, and the one that seems to have the greatest number of points in its favor, is that of Auerbach. He divides the different forms into three groups, viz: First the essential headaches or those of obscure origin; second, all those forms of headaches which result from diseases within the cranial cavity; and third, those which occur in diseased conditions remote from the skull.

Probably the most common type of the essential headaches, and certainly the one that causes the greatest amount of suffering, is the peculiar malady known as migraine or sick headache. These periodical attacks are nearly lifetime experience with certain persons. This is a disease in which an hereditary tendency is more strongly marked than in any other ill that assails mankind. Direct homogenous heredity has been found in over 90% of all cases, and one can assert with confidence that migraine is almost without exception hereditary. No case, no matter how typical the symptoms, should be quickly dismissed as migraine that does not give a definite clean cut history of heredity. Furthermore, one should hesitate in making a diagnosis of migraine where the attacks come on late in life, keeping in mind the fact that the greater portion begin during adolescence or in early adult life. All writers agree that the attacks after the fiftieth year be-

come milder and less frequent, and often cease altogether. The exact etiology of migraine is unknown, but Auerbach draws the following conclusions: "That the symptom complex of migraine can most plausibly be explained if we assume that the predisposition depends upon a disproportion between cranial capacity and brain volume, and that the attacks are brought on by exciting causes which, through the action of the vaso motor mechanism, are calculated to exaggerate this disproportion."

There is another form of headache of obscure origin, that is found in the great class of neurotic individuals. For in this class headache becomes a common and troublesome complaint, and in a large number of cases is the only symptom mentioned. The intelligent neurasthenic, however, will tell you that the headache from which he is suffering is different from the ordinary acceptance of that term, and will in most instances describe it as an uncomfortable sensation between the scalp and the skull. In the great majority of these cases there is no actual pain, but a feeling of oppression and a sense of constriction or heaviness of the head, while most of these cases are readily recognized as neurasthenics, the neurasthenia should not be accepted as a cause of the symptoms, until all organic explanations have been excluded, as it is very easy to do these sufferers an injustice.

Another form of essential headache is the nodular or rheumatic variety. It is rare in this country, but is thought to be very common by the Germans. It occurs mainly in middle-aged women, beginning at the occiput and base of neck, and is usually extremely severe. Careful examination shows many small tender nodules in the fascia of the muscles of the scalp and the base of the neck.

Under the second class we group those diseases arising in the cranial cavity, including neoplasms and diseases of the meninges and brain. Probably the best known example of this group is that due to brain tumor. It is a protracted obstinate headache and is described as dull, boring or gnawing in character, and is always referred to the interior of the skull. The degree of pain is usually extreme and in tumors of rapid growth may become unbearable. In many cases it is accompanied by a peculiar vomiting not associated with nausea.

In cerebral abscess, whether of otitic, trau-

matic or metastatic origin, headache is an early and constant symptom, although it is not usually as severe as in brain tumor. Almost equally prominent with these two conditions as a cause of headache in this second class, is that due to meningitis; here the diagnosis is usually readily made by means of the lumbar puncture and the classical signs and symptoms of this disease. Cerebral arterio-sclerosis, hysteria and trauma may cause headaches which fall under this class. We also find a large number coming from errors or refraction and diseases of the nose and accessory sinuses.

In the third class, those arising in conditions remote from the skull, one of the most common is found in the initial stage of typhoid fever. There is also a severe headache found in the true attacks of influenza and in many cases of malarial paroxysms. Syphilis likewise is a disease where an intractable headache is present, which is usually worse at night. Sometimes headache will be the first symptom to attract the attention of the patient in those slowly developing forms of interstitial nephritis. The headaches which are more commonly found in general practice and the ones that give the greatest amount of trouble are those due to constipation and uterine disorders. There are many other diseases in which headache is a constant accompaniment, but time and space forbid my taking them up at this time.

In conclusion, just a few words about treatment in general. The first step in the treatment of any disease is the removal of the cause, if possible, and this holds true in headaches as well as in any other condition. Nothing could be more irrational than a routine administration of medicine to quiet the suffering without attempting to remove the cause where this is possible. Many of the forms of headache here mentioned are susceptible of prompt relief or entire cure, by timely and sensible regulation of the life of the patient, his habits, surroundings, influence of occupation, and by the correction of diseases and disorders upon which the headache depends. In these various ways may be influenced the headaches of indigestion, biliousness and constipation; of cerebral overwork and emotional excitement; of insolation and eyestrain; of many cases of debility; of bad ventilation; malaria and overstimulation of various sorts; of uterine and ovarian diseases, and of syphilis.

PERINEAL HERNIA.*

W. F. Shallenberger, A.M., M.D., Atlanta, Ga.

The term Perineal Hernia is not very descriptive of the condition I wish to bring up for discussion. Uterine prolapse or vagina-uterine prolapse conveys the idea better, but I have selected Perineal Hernia as the title of my paper, first because the perineum is always involved, either primarily or secondarily, in these hernial protrusions, and in the second place, because I wish to emphasize the fact that, in every essential, no matter how slight the sagging down may be, all these conditions are true herniae.

It is particularly the major type of the hernial conditions affecting the birth canal and adjacent organs, by reason of their proximity, that I wish to discuss. The subject is an old one and I have nothing especially new to offer, but there are several points that are worthy of emphasis.

I want to first bring out a few anatomical points which have a direct bearing upon the subject from both an etiological as well as a surgical aspect.

Bladder Supports. The true ligaments or suspensory ligaments of the bladder are attached to the posterior surfaces of the pubic bones at the symphysis, one on either side, and they run down to the vesicle neck where they blend with the reflection of the recto-vesicle fascia which passes between the urethra and bladder above and the vagina below. It is the suspensory ligaments that hold the vesicle end of the urethra up behind the symphysis. They have many smooth muscle fibers in their composition. When these supports stretch or give way, the urethra and vesicle neck are allowed to slide downward and forward from behind the symphysis.

The triangular ligament fills in the upper angle of the pubic arch together with the deep transversus perinei muscles and they give added support to the urethra and lower vagina laterally. In the female the triangular ligament and deep transversus perinei muscles are partially divided in the middle by the vagina.

The support of the bladder, where it is in a position with the anterior vaginal wall, is due to the reflection of the recto-vesicle fascia and this is the true support of the base of

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the bladder. When this thin fascia becomes overstretched or split it is difficult to successfully utilize it in holding up the sagging bladder. The bladder acts as a dilating "bag of waters" with telling effect once the integrity of this fascia is impaired.

Of course the intact perineum is important as a secondary support for the vesicle base.

Supports of the Uterus. I shall not go into a detailed discussion of the various agencies which maintain the uterus in its normal position. But I do wish to emphasize a few of the more important structures. The broad ligaments with the shelf of fascia at their base and about the cervix—the ligamenta transversa colli of Mackeurodt or, as they are more commonly known, the cardinal ligaments of Kock's—are undoubtedly the most important single structures which support the uterus in the pelvis. These ligaments are composed largely of smooth muscle fibres near the cervix and pass into fibrous bands which spread out to become attached to pelvic walls. They lie between the layers of the broad ligaments at their base. Deep injury to these structures at childbirth is the causative factor in many cases of descensus of the uterus that leads eventually to prolapse.

The importance of the utero-sacral ligaments has been overlooked in the past, though as far back as 1850 an attempt was made to utilize them in supporting the uterus. Bovee, since 1902, has done much to bring into surgical prominence the utero-sacrals and Jellette of Dublin established their surgical value by describing an easy method of employing them.

Somers and Blaisdell of San Francisco are doing an exhaustive piece of work on these ligaments, going into their anatomy, structure, comparative anatomy and surgical utility. They are issuing a monograph on the subject and have made a preliminary communication.

These ligaments, like all other uterine supports, are composed of peritoneal folds, fibro-elastic mesh work and smooth muscle fibers. They run down from the sacrum around the lateral walls of the rectum and on either side of the Douglas' cul de sac to the cervix and upper part of the vagina. They offer the only force that directly opposes the descent of the uterus in the long axis of the vagina.

Of course much depends upon the integrity of the perineum. The levator ani muscles with their fascial investments and the vaginal and rectal slings are the real supports

of the pelvic floor and they constitute the true closer of the vagina. Bleeding with them in the central tendon are also the fibres of the superficial transversus perinei muscles.

Etiology of Perineal Hernia. Primarily injury at childbirth is almost invariably the causative factor. In senile cases we have, as added factors, atrophy and loss of tone of the supporting structures. In rare instances we see even marked descensus and prolapse of the uterus with rectocele and cystocele in multiparous women and even in virgins. I have seen two cases in women who have never been pregnant, both of them comparatively young. One patient had an extreme descensus or partial prolapse of the uterus with marked relaxation of the perineum and the characteristic elongation and hypertrophy of the cervix that we see in these prolapse cases. Operation was done in this case. The other patient had considerable perineal relaxation with descensus of the uterus and a slight cystocele. A pessary was used with much benefit, but I do not doubt that she will eventually have to come to operation.

The most common injury during labor is laceration of the perineum. It has been my experience that frequently there is less tendency to herniation in patients who have had complete tears directly through the perineal body and sphincter and muscle than in those with less extensive tears that have extended laterally into the fibers of one or the other levator ani muscle. Where the levator fibers have not been torn the vagina is better closed and in complete tears the full rectum is not in force to help to aggravate the condition. Of course we must also take into account the fact that the uterus may remain perfectly supported by the cardinal ligaments, etc., even though the perineum be greatly relaxed. A long continued absence of the secondary support of the perineum will lead to hernia, however, due to the action of the intra-abdominal pressure acting from above. It is the intra-abdominal pressure in all cases which forces the pelvic contents down. When the perineum is relaxed the direction of the long axis of the vagina is changed and instead of being at right angles to the line of action of this pressure it becomes more nearly parallel to this line of action and less resistance is offered to the intra-abdominal pressure.

Injury to the cardinal ligaments, as I brought out before, is a very potent factor in

determining perineal hernia. With this support gone, the uterus is allowed to sag down and later assume a position with its long axis corresponding to that of the vagina. With little or no relaxation of the perineum a uterus in this position may be forced down and out in time by the pressure from above. Neglected retro-displacements of the uterus after labor may frequently be the primary factor in perineal hernia even though there is practically no injury to the cardinal ligaments. This furnishes literally and figuratively, the entering wedge.

Any interruption to the puerperium which might interfere, by its effect upon the general health, with the involution of the ligaments or uterus, would act as a contributory cause. Any intercurrent disease, for example. I have one patient who had a severe suppurative mastitis in the fifth week and involution was delayed in consequence. There was no perineal laceration, and with the use of a pessary and local treatments and douches the sagging of the uterus was overcome. I had put a pessary in during the fifth week in anticipation of trouble, and this pessary came out in a short time, but the patient failed to tell me until the sagging of the uterus became apparent to her about four weeks later. At this time, ten weeks after confinement, the uterus was still in a state of sub-involution and had been forced down almost to the vaginal orifice. The ligaments were probably also sub-involuted and this accounted for the descensus. If this condition had not been promptly corrected and treated there would undoubtedly have been a prolapsus in course of time.

Treatment of Perineal Hernia. Just a word as to prophylaxis. Every measure at hand must be used to protect the perineum during labor, and this includes patience. Slow delivery does not always preclude the possibility of a perineal laceration, but it minimizes the chances. Of course judgment must be used and we must not lose sight of the fact that a slow and tedious delivery may cause petechial hemorrhages into the brain of the baby.

Given a laceration, the important thing is to recognize it and repair it. I believe in immediate repair of tears and, when carefully and thoroughly done, it will nearly always give good results. Some men wait until the following day for all their repairs. This is advisable where you suspect a separation of the muscles without a superficial or

skin tear, and have difficulty in determining it immediately after labor. Examination should be made in such a case on the next day and operation performed then is separation is found. I see no reason for deferring repair otherwise in the ordinary case.

Another prophylactic measure is to make sure that the uterus is in good position before you discharge your obstetrical patient.

I make an examination at the end of the second week and if there is any tendency for the uterus to drop down or back I use a pessary and the knee-chest position. I have had much success from both those procedures. The pessary that has given the best results is one that I make from a hard rubber ring pessary by first moulding it into an oval and then turning up each end of the oval on the same side. The one upturned end fits in behind the cervix and the other comes up back of the symphysis under the urethra.

The knee-chest position has given results only when the nurse or attendant has been shown how to properly get the patient into the position and then to raise the buttocks on either side to allow the vagina to dilate with air. Unless air is allowed to enter the vagina in this way very little benefit will result from the position. When the vagina dilates with air the pelvic viscera will always fall forward to a greater or less extent and this is what eventually brings results. The patient will often tell you that she knew exactly when the uterus went forward into ante-position. This will sometimes occur the very first time the position is assumed and again it will require repeated trials. I usually have the patient try this knee-chest posture at least twice a day for a week or so and then, if the uterus still remains back, I bring it up bimanually and put in a pessary. I make several other examinations and am not satisfied unless the uterus is in ante-position at the end of the process of involution. A uterus may be in good position at the end of the fourth week and be displaced in the sixth or seventh week.

As regards operative treatment of perineal hernia, the fact that there are such a vast number of procedures advocated would of itself indicate that the surgical treatment is on an uncertain and unsatisfactory basis. The purpose of all operations for these conditions should be, so far as it is possible, to restore to normal position, relations and function all the parts involved in the hernia. Here this includes the uterus, vagina, bladder

and urethra and the rectum. The operation must also be reasonably certain of a high percentage of permanent cures. To fulfill all these requirements in all cases is, of course, out of the question. No operation has yet been devised that will do so. In many cases where the patients have passed the menopause, the function of the uterus need not be considered and in a few senile patients the function of the vagina can be disregarded. Each case is a law unto itself and must be dealt with according to the requirements and indications that present.

The most important and most difficult part of the problem is the cystocele. The rectocele can usually be successfully and permanently relieved, if the perineal muscles are not too much atrophied or atonic. The prolapsed uterus alone would not be so difficult of disposal. But it is the ever present cystocele that complicates the situation and furnishes one of the hardest problems in gynecology. Unless the sagging, protruding bladder is firmly and securely supported there will be recurrence in the majority of cases.

The most feasible and most successful operation, so far as recurrences are concerned, is the interposition of the uterine body between the base of the bladder and the vagina. This has the objection that we cannot retain the function of the uterus. If it is done during the child-bearing period, sterilization must be done and the uterus is placed in bad position for menstrual drainage. It is an operation to be avoided during the menstrual life, if possible, though if we wish to be successful in curing these herniae, we cannot afford to be too conservative. I have only done the operation in two cases before the menopause and there have been no bad results in either instance. One patient was in the forties and the other one was a little dwarf who had had the base of the bladder completely destroyed in an effort to give birth to a child, and I brought the uterus down beneath the bladder to afford support which I could get in no other way. Both patients continued to menstruate without any trouble whatever. Of course I excised the uterine portion of the tubes at each cornua to prevent the possibility of a subsequent pregnancy.

Where the patient is beyond the menopause and there is no uterine disease to necessitate removal of the uterus, I think this is the operation of choice.

When it is necessary to retain the child-

bearing function, many of the operations are ruled out. All procedures that have as a basis hysterectomy or ventral fixation, for example. Where we must be conservative I think the old operation of amputation of the cervix, which is nearly always elongated and hypertrophied, together with an extensive and careful colporrhaphy and perineorrhaphy, is as good as any. It is well to utilize the utero-sacral ligaments also to give support to the cervix and upper vagina. This operation retains normal relations and functions better than any other. Amputation of the cervix may predispose to abortion in event of a pregnancy and there may be a large percentage of recurrences, but this would be true of any conservative operation. Hirst reports several hundred operations of this kind without a recurrence in a single instance, so far as he has been able to follow his patients.

Goffe's operation of vaginal transposition of the bladder high up on the fundus is rather popular in this country. I have done this operation on one patient and, while the immediate result was good and there had been no recurrence when I last heard from the patient, the operation did not appeal to me particularly.

Gray, of Jersey City, has a similar operation which he does from above and in addition does a Gilliam suspension of the uterus. There are numerous other operations of this kind which are designed, as are these, to permit of child-bearing. I do not have the time or space to consider them. It is needless to say that none of them would stand the strain of a subsequent pregnancy, but no operation could be expected to do this.

When the uterus is not to be conserved, many operators do a hysterectomy with ventral fixation of the cervical stump. Others do a ventral fixation with the retained uterus. Harris brings the uterus up through the midline incision and secures it there by transfixing it. But none of these operations properly disposes of the cystocele. Montgomery, of Philadelphia, does a vaginal hysterectomy, first separating the bladder widely from the cervix and anterior vaginal wall. The bladder base is drawn up by sutures passing through the broad ligaments laterally and the bladder wall between a point midway from the vesicle neck to the peritoneal reflection.

Somers, of San Francisco, champions the vesico-vaginal interposition operation, but

thinks that use should be made of the utero-sacral ligaments to support the cervix and vaginal vault.

The vesico-vaginal interposition operation is known variously as the Freund-Wertheim, the Freund-Watkins, the Watkins, the Wertheim-Schauta operation, etc., etc. I shall not go into the different points of technique. The operation is, no doubt, well known to most of you. It is not especially difficult after the steps have been worked out. Injury to the bladder and ureters is the main thing to avoid. With the uterine body supporting the base of the bladder there is little opportunity for recurrence of the cystocele, unless the tissues are so atonic or atrophied that they offer no support to the uterus.

No operation for perineal hernia will be successful unless the perineum is restored and the relaxation thoroughly and completely repaired. I do not think it suffices to merely bring together the separated levator ani muscles and fascia in the midline as is usually done. A thick, firm perineal body should be built up. The posterior vaginal wall and rectal wall should be separated for some distance and the perineum restored by bringing together the exposed muscles and fascia with several layers of sutures.

Conclusions.

1. Perineal hernia offers one of the hardest problems in gynecology.
2. Recurrence after operation is usually due to improper support of the cystocele and this is the most difficult phase of the problem.
3. If it is not necessary to conserve the function of the uterus, the vesico-vaginal interposition of the uterus is the operation of choice, provided there is no uterine disease that calls for hysterectomy.
4. A thick, firm perineal body should be built up.

DISCUSSION OF DR. SHALLENBERGER'S PAPER.

Dr. Edward T. Coleman, Graymont: I have enjoyed the paper very much, and I rise to mention one thing, which, as far as my observation goes, encourages retroversion of the uterus, and that is the patient during the lying-in period lying on the back constantly. It has been my habit to advise patients to lie almost altogether on one side or the other. I think you will find this is a

valuable suggestion and will prevent many of these cases of retroversion of the uterus.

Dr. Hartley: There is just one item I have found valuable in line with the doctor's suggestion to avoid prolapse of the uterus, or subinvolution, and that is utilizing the knee-chest position in these labor cases. I make it a rule in all these cases that come to me to emphasize the value of this. One woman, who was in a hurry to get up, got up too quickly and stayed up too long. I paid very little attention to her because I waited on her sister and mother a year previously, and I thought they would take care of her. She wanted to get back to another town to her husband. I found the uterus down. I gave her instructions to assume the knee-chest position in retiring, and in two weeks more restoration was absolutely perfect.

In the next case they dismissed the nurse when two weeks were up, when they should have kept her as it takes six weeks to get involution. Instead of getting a housekeeper she let the nurse go and did light housework. In two weeks she was down and out. I put her in the knee-chest position and in two weeks she was all right.

Dr. T. J. Charlton, Savannah: Accepting Dr. Shallenberger's broader title for his paper, it brings us to one of the most common and difficult problems we have to deal with in the practice of surgery. I agree with him thoroughly in what he has to say except I do not like the operation of placing the uterus in front of the bladder. It seems to me that is a bad process. We put the uterus out of relation to its true position and we simply throw the body between the bladder and the vagina, which normally does not belong there. If we take these cases in which there is a rupture of the perineum, and with sagging down of the perineal support, or those few cases which we see where there is an atonic condition without rupture of the perineal floor, there is a lowering of the uterus and its adnexa. The point which I want to dwell on more has a bearing upon the position of the uterus after labor. There is a marked tendency to change from the old method, but there is one thing we have got to recognize and that is that in the evolution of the human being the uterus occupies the wrong position; in other words, this portion of scaffolding of the body is dormant, but has its right place for the position of the quadruped. Now we are on our feet we have

to arrange for it. The too early getting up of women in labor prevents this trouble. I believe that we have got to give these parts time enough for the natural involution process to establish itself. I do not believe the weight of the uterus produces this condition. I believe it is due to faulty involution, and that the different position does not materially interfere with it. I think it is purely a question of tone of the structures. I do not think we realize quite as much as we should the giving away of the cardinal ligaments in this process, and particularly in that large number of cases where we see faulty positions of the uterus following the birth of the first child. We find a woman in vigorous health and after the birth of the child, at the end of the puerperal period, at the end of a month, the uterus has sagged down. As Dr. Shallenberger has said, it is apparent the long axis of the vagina and the body of the uterus is thrown back. I have seen a great number of cases operated on. My rule is not to operate on those. I have stuck to the pessary, and I have found no more valuable aid in surgery than a properly adjusted, carefully used pessary. It will replace the uterus and give time for the cardinal ligaments and tissues about the cervix to harden up and taken on proper involution. In my practice I protest against the early getting up of women. I do not believe a woman ought to be up in a few days, and I do not think the position of lying on the back has much to do with it. It is a question of tone, and when the uterus has a lack of tone we must face the problem in a way different from the matter of posture. I do not think the knee-chest position has much to do with it. I cannot see how ten or fifteen minutes a day will counteract the effects if we accept the remaining hours of the twenty-four. It does not seem logical. I have met that condition in the after treatment by the tone and the replacement of the uterus.

Dr. R. R. Kime, Atlanta: I have been much interested in the doctor's paper except the question of the Wertheim-Watkins operation. That should be prohibited except when you have reached the age by which you never expect the woman to bear children. It is an operation that will be extremely dangerous in case the woman should become pregnant, but after that age I think it is the best operation to do, otherwise I should not do it. It is my custom never to do a suspension of the

uterus from the abdominal wall. I feel that is not in accordance with the anatomical conditions and adds traumatism and dangers to a condition of that character which are not necessary. I have had to follow up some of that work and loosen up some of the cases to relieve them of the extreme nervous conditions, such as pain, tenderness, and so on.

As to the position of the uterus, I do not understand fully the statement made by the last speaker (Dr. Charleton) when he said we go back to the original condition of the quadruped. The position, I take it, makes no difference. If we go back to the original condition, to put the lying-in young woman in the original condition is to put her on her side and draw the knees up in the Sim's position. That comes nearest to the quadruped position. When she assumes that position it carries the organs up into the upper part of the pelvis. That is not applicable in the first week or ten days, but later on it is applicable. It has its utility and advantages.

Some five or six years ago I presented a paper in which I advised never to let a patient lie on the back during the lying-in period. That has caused more trouble than any position; but put her on the side twenty hours out of the twenty-four, first on one side and then on the other. It is a good plan to follow up these cases and examine them two or three weeks after delivery and see if you have a retroverted uterus, and if so, then is the time to correct the retroverted uterus. If you see that the organs are carried into the upper part of the vagina in the posterior cul-de-sac and you hold the uterus forward and adjust a support, you can correct from seventy-five to eighty-five per cent of the cases by local treatment and avoid abdominal section later on.

Dr. Shallenberger, in Closing: There are one or two points in connection with the remarks made by the gentlemen who have discussed the paper that I wish to take up. I do not believe in getting the puerperal woman up early. I think ten days or two weeks in bed is better. There is a certain shock in connection with labor which requires rest, and I do not believe that the getting up of the patient has much to do with whether you get a retro-displacement of the uterus or not. I believe in the postural treatment, as Dr. Coleman and Dr. Kime brought out. The woman should lie on the side or face during the time she is in bed as

much as possible. Some good results are obtained from the knee-chest position. If the patient assumes the knee-chest position the vagina should dilate with air, and as long as that is done the pelvic organs will drop forward and the uterus will tend to swing down in the abdomen into a more normal position. Every time the uterus is gotten into a normal position it helps if it is only for a few minutes. I agree with Dr. Charleston in what he has said in regard to the use of pessaries. Pessaries are important things, and we have gotten too far beyond the use of them. I have great success from the use of pessaries in puerperal women and also in other retrodisplacement of the uterus. It is my custom to examine a woman after labor in the third week, that is, about the end of the third week make an examination, and at that time, if there is any tendency to retrodisplacement, it is advisable to put in a pessary. Sometimes it is not well to put it in so early as that. In these cases the ligaments have been over-stretched and they have to be returned to their normal size and tone, and I think subinvolution of these ligaments is at fault in many cases where we get retrodisplacements after pregnancy. I like the use of the pessary, not the Smith-Hodge pessary, but a pessary with one curve to it, and I have gotten better results from it than any other type of pessary. Muscle tissue improves with work, and fascia and ligaments improve with rest. Whenever the fascia and ligaments are over-stretched, we should give them a chance by putting them at rest, and a pessary helps to do this.

As regards the operation of Wertheim-Watkins, it seems unsurgical to put the uterus in that position, but the splendid results obtained make me think it is a good operation. I do not think it is advisable, however, to do it during the child-bearing period unless absolutely necessary.

KEEP RECORDS OF YOUR CASES.

There is no adjunct to the practice of medicine that yields as good a return in money and in satisfaction as the keeping of records of cases. And yet we believe that this practice is neglected by a majority of general practitioners. There may be some doctors who can carry in their memory all of the important features of all their cases. Most of us cannot, and we all know how embarrassing it is to the doctor, how unsatis-

factory to the patient, to find when visited by a patient that all of the facts gained at a previous visit, as well as all recollection of what was done for the patient, are gone. We ask general questions in the hope that a clue will be dropped that will recall to our mind some recollection of the case. We look at the medicine ordered at a previous visit and smell it, hoping we can remember the condition for which it was ordered. Sometimes we are successful in deceiving the patient, but generally we are not. How much better it is to turn to our records, get accurate knowledge of the case, compare it with present conditions, and thus avoid embarrassment, uncertainty and delay. We know it is tiresome, after a hard day's work, to sit down and write notes of cases, but these notes need not be elaborate in order to be useful. We have not found the blanks supplied by dealers in such things very useful. Some doctors find that prescription blanks kept between lettered cards and in alphabetical order answer every purpose. The principal features of the case and an outline of the treatment can be entered in a few lines, as well as anything interesting or relevant in the family history or in the previous history of the patient. Many physicians use abbreviations of their own which diminish space and labor—such as "S. B. P." for systolic blood-pressure, or "Mic. Ex." for the result of microscopic examination. An incidental advantage in keeping such records is that we often find when we come to write it down how little we know of the patient and how superficial our examination has been. Cases of unusual interest or importance may be written up with as much detail as seems necessary, as the plan above outlined admits of indefinite expansion, but for the ordinary run of cases, as we see them in their homes or at our office, we believe this method will be found very useful in our daily work. Records of urine examination, blood examination, etc., may be kept on similar blanks and filed with the other notes of the case, also reports of pathological findings and operations, and letters from specialists bearing on the subject. It cannot fail to be satisfactory to the patient to know that a physician has a record of his condition, and this knowledge makes the patient more likely to return to the physician who has this record rather than go to another, who, in order to treat him intelligently, is obliged to go over the whole ground. So

that if nothing better than pecuniary gain (which, let us say in passing, is a perfectly good reason), makes a doctor keep these records, it is quite worth while. If we want to get the most improvement out of our work, if we want to collect and compare our results, and especially if we want to report them, the keeping of records is indispensable.—Reporter, Chester County (Pa.) Medical Society.

THE DESTROYER OF CONFIDENCE.

"See no evil, hear no evil, speak no evil," so runs the Confucian proverb; to this should be added the appearance of evil. What a man thinks is written on his face, betrayed by his attitude and told by the eyes, the hands and the feet. Words are quite as often the instrument of concealing thought as of giving it clear expression. But it needs no gypsy to read the mind as it plays upon the muscles of expression through the emotions. A man may speak fine sentences that he does not mean, but his looks belie his words. And so a man's reputation may suffer more from a shoulder shrug, a sarcastic smile or mere silence, than from a slanderous tongue. This is the secret of how some men destroy confidence in others by their mere presence, though they say not a word.

Then there is the man who by his acts puts you in an evil light. He enters the consultation room like a hero coming to the rescue; he leaves the impression that he arrived just in time to prevent some dire calamity; his acts speak louder than words, and as a destroyer of confidence is a thousand times more potent.

Another means of destroying confidence is by the "joke." "It was so funny," Dr. X's mistake. Presumably no harm was intended in the telling, but in the end Dr. X has been laughed at, and when you once have laughed at a man's failings he never commands the same respect that he did before. When the nurse and family are laughing at you, your prestige will not last long. Men learned in dispute have long known the power of ridicule. "Ridicule shall frequently prevail and cut the knot where graver reasons fail."

And finally, we have the man who openly attempts to destroy confidence by seeing, hearing and speaking evil constantly. He does no harm, but he works in the open and gives you a chance to defend yourself. The public comes to know him at his true value,

and as a destroyer of confidence he does not compare with the man whose actions speak louder than words.

The fault of destroying confidence has been condoned by the assertion that the medical profession is overcrowded and that competition is so strenuous that one must push his way by fair means or foul. But the argument will not suffice, for the attempt to put competitors in an evil light is quite as common where clients are many as where they rarely disturb the struggler's solitude.

And what is the net outcome of it all? Loss of individual and professional prestige, for if we do not respect each other whence shall come the respect of the public?

We are all more or less guilty and perchance the writer is among the chief of sinners, but nevertheless the destroying of confidence is a wicked business that is leading us into much trouble and vexation. It is a matter that should receive more attention at the hands of the county medical society.—Bulletin, El Paso County (Texas) Medical Society.

GOOD RESOLUTIONS.

1. To defend the fraternity.
2. To prescribe no patent medicines.
3. To charge fees just to self and patron.
4. To regard your neighbor kindly, not jealously.
5. To work for your County Medical Society.
6. To devote one hour daily to reading medicine.
7. To support insurance companies paying \$5 for examinations.
8. To attend every meeting of the society.
9. To take part in the discussion.
10. To prepare a paper or address when requested.
11. To get a new member.
12. To remember that you are a doctor.

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ANONYMOUS CONTRIBUTIONS, whether for publication, for information, or in the way of criticism, are consigned to the wastebasket unread.

NEWS: Our readers are requested to send us items of news of a medical nature, also marked copies of local newspapers containing matters of interest to physicians. We shall be glad to know the name of the sender in every instance.

WAR AND DISEASE.

As might have been expected, disease is stalking on the trail of the warring European armies. It appears to be officially admitted that Asiatic cholera has appeared in the Austrian army that is retreating through Galicia, and despatches from Belgium state that typhoid is prevalent in some of the German regiments stationed as garrisons in the Belgian towns south of Antwerp. As the desolation of the ravaged countries increases, as the water courses become more and more polluted, and as the burned and deserted towns and villages are abandoned to the fortunes of war by a disorganized public health service whose personnel is prob-

ably scattered along several hundred miles of battle, infections of one kind or another will appear and spread among both the civil and military populations until the unhappy countries become thoroughly saturated with pathogenic germs that it will take years to eradicate.

When one takes into consideration the costly and elaborate precautions that are necessary in days of peace and order to safeguard the health of the people it does not take a very vivid imagination to picture the myriad evil spirits that may be let loose from the Pandora's box that the present crime against humanity has opened. Fields strewn with unburied and decomposing corpses, watercourses infected with the typhoid, the colon and the cholera bacillus, wounded soldiers crowded into houses in which, yesterday, a woman may have died of puerperal infection—these are but a partial enumeration.

In some of the armies the lessons taught by the Crimean and the American Civil War seem to have passed unheeded, and as the months go by and winter approaches we may see a repetition of the fearful mortality of Scutari—for it is hard to point out any essential difference between the physical surroundings of Scutari and the towns of France, Belgium, Germany and Austria, where the wounded of today are being taken care of.

Fortunately, from Pandora's box Hope could not escape. That is all that is left to us as we contemplate this unspeakable horror day after day. Fatal and mutilating wounds upon the battlefield are bad enough, but inglorious disease, evidence of man's incompetency and stupidity, and smiter alike of the innocent and the guilty, is worse, for it throws away most of what we have gained to contribute to the happiness of mankind.

DEPENDABLE ADVICE FROM THE GOVERNMENT.

The United States Department of Agriculture publishes a little four-page leaflet under the title, "Weekly News Letter to Crop Correspondents." As the title would indicate, it is devoted to discussion of questions of interest to the farmer, such as, for instance, "The Use of Chemical Plant Poisons in Killing Weeds." "Nitrate of Soda on Old Meadows," "Do Not Hold Marketable Eggs Too Long," etc. We do not know the ex-

tent of the circulation of this periodical, but we see in it much power for bettering the public health. Probably the Department of Agriculture did not have this in mind when the movement was begun, and may not have it in mind at the present time. Doubtless the idea is to help the farmer in every way possible, particularly in the matter of expert and practical agricultural advice. We trust the officials in charge will not fail to recognize the fact that the health of the farmer is not the least of his considerations, and consequently the consideration of the government. A little level-headed advice against self-dosing and poisonous patent medicines, will help more to eradicate that evil from among a class which is particularly prone to it than almost any amount of preaching that the medical profession could do. Notwithstanding the unlimited confidence placed in their family physician by this class of people in matter of illness, they will generally not pay a great deal of attention to his advice along this line. The idea seems to be inherent in them that the doctor has a self-interest that perhaps may be excusable, but that exists just the same, and they take what he says against the patent medicine as an evidence of this fact.

We are brought to this observation by a short contribution in this "Weekly News Letter" under the title "Thyroid a Dangerous Weapon Against Fat," which is full of truth and which is written in a style in keeping with the other contributions in the same number. It will be read and will do good. It was written by a physician, as all such articles should be written, and we trust other subjects will be handled from time to time in the same manner. We quote from the article in question the following:

"The department has found in the course of a recent investigation into the composition of the so-called obesity cures that a large number of these contain thyroid. Thyroid, in the opinion of the government scientists, is far too dangerous a weapon for inexperienced persons to experiment with. The thyroid gland itself is one of the mysteries of the human body that the medical profession does not yet fully understand. We know that it is essential to life and that when used as a drug it has a very powerful effect upon the whole human system. This information should be sufficient to warn anyone against dosing himself blindly with the drug.
* * * Its presence in the body is appar-

ently necessary to the health of its possessor, but administered in the form of a drug it may have anything but a healthy effect upon its user. * * * Unfortunately it is not possible to remove tissue at will without running great risk of destroying health at the same time. Abnormal deposits of fat are frequently accompanied by disorders of the heart, blood vessels, and kidneys. To remove these deposits abruptly may well produce serious mechanical effects upon the operation of the internal organs. For this reason the medical profession has long recognized that obesity should be considered as a condition worthy of the most skillful treatment and that a cure is never easily and quickly attained. * * * Trained physicians may administer the drug to obtain certain desired effects, but they know that they must use great care in doing so and must be prepared to grapple with serious complications that may arise in consequence of its administration."

While doubtless the Department of Agriculture will call upon well qualified physicians for such contributions, at least the data for such contributions, how much better it would be if there were a Department of Health upon which such demands could be made and which could plan a systematic campaign through this medium. Such a department working in conjunction with the Council on Public Health and Instruction of the American Medical Association, and receiving the support of the various other departments of the government, and the several constituent state medical associations, could in a short time cut in half the life, accident and morbidity insurance rates of this country. The saving in sorrow and sickness, pain and privation resulting from such a campaign is beyond calculation. When the great American people begin to find this out, the National Leagues for Medical Freedom can go bang.—Texas State Journal.

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THE IDEAL COUNTY MEDICAL SOCIETY.

The ideals about to be set forth are idealistic in that they are the acme of a county medical organization and not idealistically impracticable. They each and every one have been realized by some county societies, and while I realize that they will take time and work to realize still they are worthy of the labor.

The first and foremost object of the county society should be a selfish one, namely, betterment of the county physicians. To do the most good every legitimate means should be employed to make every physician in the county a member of the local society.

Letters telling of the aims and scope of the society should be sent to every county physician at least once, if not oftener than once a month. In these letters the object of the society, such as dissemination of knowledge, better personal acquaintance, social features, etc., should be set forth in an attractive way. Another, but more roundabout way is advertising in the papers, as local news, that the county society will meet at such an hour on a certain date, and the subject of the paper and name of author should be given. Also the fact that the society held a meeting should be given, together with the names of those present and names of those taking part in the discussion. This is, as I said, an indirect method of getting new members, as it forces them to it through public opinion. This method may be considered unethical or smacking of pokery, but I contend that anything legitimate to further the interest, as a whole, of the medical profession is ethical.

Another very important thing is the character and sureness of the papers. Each member should feel it to be his solemn duty to put forth his best efforts when requested to read a paper before the society. How often have you heard the remark after a member has read a good paper, "That paper read by Dr. so and so was a good one, and I didn't know he had it in him."

The only way we have of advertising is by the reading and publication of papers, and when a member reads or gets published a good paper it helps him and when he reads a bad paper it hurts him. It hurts him by acting in a negative way when he appears without a paper or doesn't appear without sending in his paper. It is a stamp of intel-

lectual cowardice for a member to fail to read a paper or to send it in when he is unavoidably prevented from attending the meeting. He is unwilling to show his knowledge or lack of knowledge of the subject.

There are two more important factors in the building up of the ideal society that are neglected and which are easily accomplished. One is a bulletin giving the list of officers, list of members, minutes of the last meeting and the papers which were read with an abstract of the discussion and other matters of interest to the profession. This could be published monthly, or where the society met only once a month and only one or two papers were read they might be issued every two or three months. The only objection to this is the cost, and it is very slight, frequently, though, advertising would be gotten to pay the expenses. The other is a society library. A room could be rented and each member could contribute his journals after he had read them and they could be filed away, or with a small assessment every month from each member two or three of the best journals could be bought, and also some books. Another way is to get members to will their libraries to the society. This is a slower way, but in a few years a good library would be the result.

With their own room, library and bulletin, the majority of the members would be attracted to the meetings, but as additional means certain special and social features could very profitably be added. This could be a dinner, barbecue, fish fry or oyster roast, according to the time of the year, and it would not be amiss to include in those present the wives of the members. It would be variety and lend a charm to the occasion no masculine genius could contribute. Another attraction would be the frequent asking of doctors who live out of the county and who are prominent in some special line to read a paper bearing on their specialty.

As most of the members are busy, with little time for reading, and the new means of diagnosis and methods of treatment are many, a committee could be appointed to investigate the new things and report on them at the next meeting. This committee could be composed of younger members, as they are usually more enthusiastic and have more time than the older men. In this way the gist could be put forth in a concise and ample way, and would be of great value to those who have not the time to get up with the

new things, and it would be very valuable for the younger men who get up the report, as it would stimulate their interest in scientific medicine and would inculcate a habit of study and preciseness in study.

The above means and ways are purely selfish—that is, they are for the good of the members of the society, but we owe the public a duty also, as we should be not only healers but teachers.

The county society as an organization should endeavor to teach hygiene and sanitary measures to the public, thereby manifesting an altruistic spirit. This, as I said before, should be an organization and not an individual measure. It is an inherent factor for the upbuilding and growth of a county society, because after the public is educated and taught that they have in their midst a body working for the betterment of the community this society will receive the co-operation and commendation of the business and other interests. It will stamp the county society as a factor worthy of notice. After this status is established the county society should demand of the county and civic officials that they be consulted in regard to measures affecting the health of the community, and that they be consulted in the appointment of the health officers. How many county or town officials in North Carolina consult the medical profession in regard to the advisability or helpfulness of the hygienic or sanitary measures they are about to enact, or ask the county society who would be the most proficient health officer? Yet we are the ones who know best, and in the great majority of cases we are the only ones who know. We owe the public a certain duty and the public owes us a certain duty. As we medical men know, the public is very suspicious of sanitary and hygienic measures as quarantine, vaccination, etc., and we must first gain their confidence by showing ourselves unselfish and charitable before they will accept us as such and give us the place in civic affairs that our knowledge entitles us to. After we have gained their confidence in our altruism we can then go to the legislating bodies and demand recognition, and if they demur, fearing that they will lose in graft or the appointment of some favorite, we can compel them to grant our demands because we will be backed by the public.

The county medical society has a bright future and an important duty before it if the profession will make it such, and if they

do they will realize that their labors will not be in vain, for honor and gain will redound to the promoters.—Bulletin, Fourth District (N. C.) Medical Society.

TAKING STOCK.

The end of the fiscal year is a good time to "take stock" in any line of business, and if physicians would but follow the example of other business institutions they would undoubtedly serve themselves and their patients to better advantage. There are so many things for a doctor to consider that he gets out of the habit, so we venture a few suggestions.

In the first place, doctor, have you kept up in a reasonable degree with the progress of your profession? Have you devoted a fair amount of time to conscientiously studying the work that has been done, and is being done, by the advance guard? Are you better equipped, mentally, than you were a year ago? If not, you have lost ground, for the profession as a whole is going steadily forward. If not, better begin at once.

Have you given your medical organization proper support? By this is not meant the question of dues. That is the smallest part. Have you attended the meetings, taken part in the discussions, given your fellow-practitioners something of yourself? To do so is to help yourself even more than you help them; to fail to do so is to fail in a distinct duty. If not, better begin at once.

Have you done the square thing by those dependent on you by conducting the business end of your occupation in a way that will not leave them penniless should you be suddenly "called," never to return? If not, better begin at once.

Have you given to those who are in destitute circumstances the same care and attention you have given the "best fixed" of your clientele; not the "bum" and the "beat," but the widow and orphan at whose door the wolf prowls? There are some of them, and they have a native pride that shrinks from asking service for which they cannot pay. Have you "passed them up" or remembered that when the final balance is struck you may need a credit of this sort? If not, better begin at once.

Have you considered how you yourself might have acted if placed in similar circumstances, under the same conditions, as the man with whom you have had a disagree-

ment? Have you considered his side of the case and analyzed your own words and actions and studied them from his point of view? Have you recalled the adage "It takes two to make a quarrel," and remembered that the other fellow, by himself, is only one? If not, better do it now.—Editorial, Mississippi Medical Monthly.

THE EDUCATIONAL VALUE OF A MEDICAL SOCIETY.*

Hubert A. Royster, A.B., M.D., Raleigh, N. C.

It is quite unnecessary to enter upon an argument to demonstrate the benefits to be derived from membership in a medical organization. It goes without saying that, in order to be effective in the world, each profession, trade or business must be organized and that the individual members must stand together. The medical profession is no exception to this principle. When we club together into societies, we are helping to cement close the whole profession everywhere into a homogenous body so that we may act as a unit on questions which concern all of us. Co-operation is a vital thing in these days and physicians particularly need it, to promote their own social and professional uplift, to secure adequate sanitary laws in their communities, and to protect themselves against impostors, delinquents and quacks. Surely none can deny that these are worthy aims and righteous prerogatives.

But these purposes, excellent as they are, do not represent all the organized profession sands for. I most emphatically believe that the highest function of a medical society is educational. Its chief reason for existence is to make better doctors of its members. Mutual relations hold here as well. We can all teach each other something and we all learn from each other. After all, we are on earth only for this—to do our work each day as well as we can and to give humanity the advantage of our knowledge and labor. The differences between us as physicians consist not in the incomes we make, or in the number of patients we see in a day, but rather in what we know and how industriously and conscientiously we use what we know. "The knowledge which we can use is the only real knowledge. All else hangs like dust about the brain or dries up like rain drops off the

stones." When we acquire knowledge it is our privilege to pass it on to others. In doing so we strengthen our own store and inspire thoughts in those who receive it. Great is the reward of the man who causes two ideas to grow where only one grew before. No man can possibly master a subject unless he either talks it or writes it. When a paper is prepared it means that the author has got hold of his subject matter and improved himself to that extent; when it is discussed the thoughts are scattered broadcast and some kernel is certain to spring up fourfold. Without debate there can be no progress; if we all agree, the wheels stand still. And this is what the medical society does—it causes us to progress in knowledge, it takes the kinks out of our thought waves, it makes for a breadth of ideas that all the reading, all the schools and all the clinical experience can never give.

The most interesting thing about a medical meeting is the feeling that we have come both to receive and to impart that which will be of service. I have sometimes wondered if we realized that the most important part of our program each month is that which relates to the actual professional work—clinical reports and the reading of papers—and that whatever else comes up is purely incidentals. The framers of the by-laws for county societies over the country evidently had this in mind, for they wisely placed the scientific portion first and then arranged for the business side. In societies which have the opposite rule, I have seen the time so taken up with parliamentary proceedings and unfinished business that the appointed subject for discussion was actually postponed to the next meeting. Debate on the fee-bill will at any time bring a large attendance, while hardly a corporal's guard may be mustered to hear a paper.

No objection can possibly be offered to the consideration of business affairs, to the question of co-operative collections or to conferences for beneficent legislation; but these matters can never be paramount. Somehow I feel that it is abhorrent to look upon our society as a trades-union or a protective association. We are not in the profession to keep somebody out or to secure laws for our own aggrandizement. We need co-operation, truly, but only with those who are striving for the same ideals as we are; we need protection, but chiefly to protect ourselves against ignorance in our own ranks. This

*Presidential address before the Wake County, N. C., Medical Society, January 9, 1913.

can be done solely by teaching each other and learning from each other. The public part and the business side of the profession will take care of themselves, if we but strive every day to know more than we did the day before. And remember that in medicine, knowledge, not money, means fame; and that fame will bring fortune, if rightly directed. This is the reverse of a trade or business, where money means fame and special knowledge counts for so little.

The value of membership in a medical society is exactly what each individual member himself sets upon it. Those who go the oftenest, pay the strictest attention and do their best work get the most out of it; while those who absent themselves, take small interest in the proceedings and never engage in them get very little out of it. I have heard men say that they got nothing out of any society meeting, that they could read it up at home, that they never saw one more dollar come to them by virtue of their membership. Such remarks make me feel sad and hopeless. I should think the social contact would appeal to those men, if nothing else. It is a fine thing to rub elbows and swap jokes with your colleagues. We do not enjoy this as much or as often as we should. There is no reason why we should not be as hearty and well-met as men in other departments of the world's work. But we are much improved over ten years ago. The petty jealousies and unjust bickerings are fast disappearing—are almost gone. And it is the medical society that has done it. Show me the man who never attends his local meeting and I will point out to you a man who is practically unknown to his professional brethren. He is aloof and alone. More than this, he is not keeping abreast of his profession. He is tested by his work (or lack of it) in the society. There are some doctors who are always too busy to learn how to do it better.

The surest way to show one's interest in a society is to attend its meetings regularly. Whatever else one may or may not do, being present is the essential thing. No church, lodge or club ever succeeded unless its members were enthusiastic in attendance. That is the spirit to infuse here. It would be a splendid sight to find at least two-thirds of our members in their seats at each session during the coming year. Shall not all of us take the pledge that nothing except extraordinary circumstances will keep us away

from the regularly appointed hours? It will mean perhaps a sacrifice of comfort to many, a strain on the memory of some and a fancied smaller purse to others; but nothing is done without sacrifice, and we may afford it once a month.

I crave your indulgence and ask your support for the program which is herewith submitted. I thank you from the bottom of my heart for the honor of presiding over your deliberations for 1913. Be assured that I feel very close to you all as brothers of the same household of faith.—Health Bulletin, North Carolina State Board of Health.

PHILANTHROPY AND BUSINESS.

There are some peculiar and mistaken notions about philanthropy. In accord with these ideas some would consider it permissible to do business in a questionable manner for a time and with the money thus obtained even up everything by a promiscuous system of giving.

We fear there are doctors who believe they can keep their character spotless and earn a reward for themselves by doing cheap work for poor people. This they call "casting bread upon the waters." In a true sense philanthropy, to be effective, must be businesslike. The man who attends the poor, let them be undeserving or deserving, and never enters a charge on his books, is not doing a philanthropic act; he is pauperizing those he thus attends and is dragging the standard of the medical profession in the dust. A straight, honest, conscientious fee, a strenuous effort to collect and a conscience void of offense in spending the money is the better way.

Let the patient know promptly what you charge him, then if he cannot pay all, let him understand that a heart of kindness prompts to give the difference between the bill and what he can pay. But don't do cheap work, for that makes cheap doctors, first in the eyes of fellow practitioners, then later in the eyes of patients.—Bulletin, Butler County (Ohio) Medical Society.

BOOK REVIEWS.

Practical Therapeutics.

With especial reference to the application of remedial measures to disease and their employment upon a rational basis. By Hobart Amory Hare, M.D., B.Sc., Professor of Thera-

peutics, *Materia Medica* and *Diagnosis in the Jefferson Medical College of Philadelphia*. New (15th) edition, thoroughly revised and rewritten. Octavo, 998 pages, with 144 engravings and 7 plates. Cloth, \$4.00 net. Lea & Febiger, Publishers, Philadelphia and New York, 1914.

Hare's *Therapeutics* has become one of the classics of medical literature. Excepting only Gray's *Anatomy*, it has probably been more widely used, both by students and physicians, than any other work in any department of medicine. It has always held the distinguished position of being by far the best exponent of therapeutics in the English language, and in its many editions it has reflected faithfully the wonderful advances of the past twenty-five years. The present new edition (the fifteenth) is, if possible, an improvement over its excellent predecessors. The same plan is followed throughout: the useful characteristics having been maintained; the text has everywhere been brought up to date, and certain articles have been added or rewritten, as, for example, those on salvarsan and neosalvarsan, tuberculin, anesthetics, digitalis and the other cardiac drugs. The text which deals with many of the newer methods, such as vaccine therapy, will be found judicial and unbiased. The following quotation from the preface is characteristic of the spirit which pervades the entire work: "This is the era of therapeutic rationalism, when remedies are given not because they are recommended by, or said to be valuable by, some authority, but because their use appeals to the medical man who has a knowledge of the physiological, pathological, and therapeutic problems to be faced, and can, therefore, judge for himself what remedy is best suited to a given case when he is informed how it acts."

Physicians, surgeons, specialists who neglect securing this volume are overlooking a book that should be in every library and referred to frequently.

Practical Therapeutics.

Including *Materia Medica* and *Prescription Writing*, with a description of the most important new and non-official remedies passed upon by the Council of Pharmacy and Chemistry of the American Medical Association. By Daniel M. Hoyt, M.D., former Instructor in Therapeutics, University of Pennsylvania; Fellow of the College of Physicians; Assistant Physician to the Phil-

adelphia General Hospital. Second edition, revised and rewritten. C. V. Mosby Co., St. Louis, Mo. Price, \$5.00.

This book is arranged so that it merely requires a glance to get the drug, its physiologic action on different organs and tissues, toxicology and therapeutic indications. This makes it a great timesaver and is worth the price within itself. It contains a list and description of all the new and non-official drugs passed upon by the Council of Pharmacy of the American Medical Association. It greatly aids the dispensing physician by showing him what drugs he may safely use and the clinical applications therefor. It also shows the importance of simple and rational prescribing based on known physiologic action, and indicates the limitations of drugs in treating the various diseases. A brief outline of vaccine therapy has been added, as well as a chapter on the proprietary medicine evil and a short article on office dispensing.

International Clinics.

A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynecology, Orthopaedics, Pathology, Dermatology, Ophthalmology, Otology, Rhinology, Laryngology, Hygiene, and other topics of interest to students and practitioners. By leading members of the medical profession throughout the world. Edited by Henry W. Cattell, A.M., M.D. Philadelphia. Volume 2. Twenty-fourth series, 1914. Philadelphia and London. J. B. Lippincott Company.

In this volume there is an excellent article on foot troubles by Walsh of New York.

Another interesting article is the resume by Phahler, of Philadelphia, on the role of the X-Ray in Diagnosis and Treatment of Disease. This article has been written for the benefit of the general practitioner and appears to us be very valuable from that standpoint.

These clinics are well bound and not only bring the journal information up to date, but present frequently invaluable original articles.

International Clinics.

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Ophthalmology, Otolaryngology, Rhinology, Laryngology, Hygiene, and other topics of interest to students and practitioners. By leading members of the medical profession throughout the world. Edited by Henry W. Cattell, A.M., M.D., Philadelphia. Volume 3. Twenty-fourth series, 1914. Philadelphia and London. J. B. Lippincott Company.

This volume is notable owing to the thorough writeup of the surgical clinic at the German Hospital, Philadelphia; Dr. John R. Deaver, Chief Surgeon.

THE ETIOLOGY OF PELLAGRA.

"Although pellagra has been known and studied for nearly two centuries," says The Journal of the American Medical Association in its issue of September 26, "not only is its essential cause unknown, but the broad question whether it is to be classed as a dietary or a communicable (contagious or infectious) disease has never been definitely determined. The spoiled-maize theory has for many years been the favored theory abroad, but its correctness has, for various reasons, been questioned by many. In this country there has arisen, both in the lay and in the medical mind, the opinion that pellagra is to be classed among the infectious diseases. This view has received important support, first, from the Illinois Pellagra Commission and, more recently, from the Thompson-McFadden Commission (Siler, Garrison and MacNeal). The Journal calls attention to a recent issue of the United States Public Health Reports in which Goldberger gives a summary of certain work now being done by the United States Public Health Service on the study of pellagra, and advances some most suggestive facts which do not in any way support the infection theory, but strongly point to the belief that pellagra is a disease essentially of dietary origin; that it is brought about in some such way as, for example, by the absence from the diet of essential "vitamins," or possibly, as is suggested by work of Myers and Voegtlin, on the presence in vegetable foods of excessive amounts of a substance such as soluble aluminum salts.

At Atlanta early in August whooping cough threatened to be a serious menace to the children. Prompt and efficient measures were adopted and the disease was soon controlled.

NEW AND NON-OFFICIAL REMEDIES.

Since publication of New and Non-official Remedies, 1914, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Non-official Remedies":

Hypodermic Tablets of Emetine Hydrochloride. Mulford.—Each tablet contains emetine hydrochloride, 0.016 gm. H. K. Mulford Co., Philadelphia. (Jour. A. M. A., Oct. 3, 1914, p. 1204.)

Aene Vaccine.—Marketed in boxes of four syringes containing 25, 50, 100 and 200 million killed bacilli. Also in boxes of two syringes containing 50 and 200 million killed bacilli; boxes of six ampoules containing 10, 25, 50, 100, 200 and 500 million killed bacilli, with a syringe; and boxes of two ampoules containing 50 and 200 million killed bacilli, with a syringe. E. R. Squibb & Sons, New York.

Bacillus Coli Communis Vaccine.—Marketed in boxes of four syringes containing 100, 200, 500 and 1,000 million killed bacilli. Also boxes of two syringes containing 100 and 500 million killed bacilli, and boxes of two ampoules containing 100 and 500 million killed bacilli, with a syringe.—E. R. Squibb & Sons, New York.

Bacillus Pertussis Vaccine.—Marketed in boxes of four syringes containing 25, 50, 100 and 200 million killed bacilli. Also boxes of two syringes containing 50 and 200 million killed bacilli; boxes of six ampoules containing 25, 50, 100, 200, 300 and 500 million killed bacilli, with a syringe; and boxes of two ampoules containing 50 and 200 million killed bacilli, with a syringe. E. R. Squibb & Sons, New York.

Pyococcus Vaccine.—Marketed in boxes of four syringes containing 100, 200, 500 and 1,000 million killed bacilli. Also in boxes of two syringes containing 100 and 500 million killed bacilli. E. R. Squibb & Sons, New York.

Gonococcus Vaccine.—Marketed in boxes of four syringes containing 100, 200 and 500 million killed gonococci. Also in boxes of two syringes containing 100 and 500 million killed gonococci; boxes of six ampoules containing 50, 100, 150, 350, 500 and 1,000 million killed gonococci, with a syringe; and boxes of two ampoules containing 100 and 500 million killed gonococci, with a syringe. E. R. Squibb & Sons, New York. (Jour. A. M. A., Oct. 3, 1914, p. 1204.)

Meningococcus Vaccine, Immunizing.—Marketed in boxes of three syringes containing 100, 500 and 1,000 million killed meningococci. E. R. Squibb & Sons, New York.

Meningococcus Vaccine, Curative.—Marketed in boxes of four syringes containing 100, 200, 400 and 500 million killed meningococci. Also in boxes of two syringes containing 100 and 500 million killed meningococci; boxes of six ampoules containing 100, 100, 500, 500, 1,000 and 1,000 million killed meningococci, with a syringe, and boxes of two ampoules containing 100 and 500 million killed meningococci, with a syringe. E. R. Squibb & Sons, New York.

Pneumococcus Vaccine.—Marketed in boxes of four syringes containing respectively 100, 200, 400 and 500 million killed pneumococci; boxes of two syringes containing respectively 100 and 500 million killed pneumococci; boxes of six ampoules containing 100, 100, 500, 500, 1,000 and 1,000 million killed pneumococci, with a syringe, and boxes of two ampoules containing 100 and 500 million killed pneumococci, with a syringe. E. R. Squibb & Sons, New York.

Staphylo-Acne Vaccine.—Marketed in boxes of four syringes containing 100 million killed staphylococci and 25 million killed acne bacilli, 200 million killed staphylococci and 50 million acne bacilli, 400 million killed staphylococci and 100 million killed acne bacilli, and 500 million killed staphylococci and 200 million killed acne bacilli; boxes of two syringes containing 100 million killed staphylococci and 50 million killed acne bacilli, and 500 million killed staphylococci and 200 million killed acne bacilli; boxes of two ampoules containing 100 million killed staphylococci and 50 million killed acne bacilli, and 500 million killed staphylococci and 200 million killed acne bacilli, with a syringe. E. R. Squibb & Sons, New York.

Staphylococcus Vaccine.—Marketed in boxes of four syringes containing 100, 200, 500 and 1,000 million killed staphylococci; also in boxes of two syringes containing 100 and 500 million killed staphylococci; boxes of six ampoules containing 100, 250, 500, 500, 1,000 and 2,000 million killed staphylococci, with a syringe, and boxes of two ampoules containing 100 and 500 million killed staphylococci, with a syringe. E. R. Squibb & Sons, New York.

Streptococcus Vaccine.—Marketed in boxes of four syringes containing 100, 200, 500 and 1,000 million killed streptococci; also in boxes of two syringes containing 100 and 500 million killed streptococci; boxes of two ampoules containing 100 and 500 million killed streptococci, with a syringe. E. R. Squibb & Sons, New York.

Typhoid Vaccine, Curative.—Marketed in boxes of four syringes containing 100, 200, 500 and 1,000 million killed bacilli. Also in boxes of two syringes containing 100 and 500 million killed bacilli; boxes of six ampoules containing 100, 100, 500, 500, 1,000 and 1,000 million killed bacilli, with a syringe, and boxes of two ampoules containing 100 and 500 million killed bacilli, with a syringe.—E. R. Squibb & Sons, New York.

Typhoid Vaccine, Immunizing.—Marketed in boxes of three syringes containing 500, 1,000 and 1,000 million killed bacilli. E. R. Squibb & Sons, New York.

Smallpox (Variola) Vaccine (Glycerinated).—Each dose in separate aseptic sealed glass tube, with bulb and needles. Boxes of five and boxes of ten tubes. E. R. Squibb & Sons, New York.

Diphtheria Antitoxin.—Curative doses, marketed in syringes containing 2,000, 3,000, 4,000, 5,000, 7,500 and 10,000 units. E. R. Squibb & Sons, New York.

Antidysenteric Serum.—Marketed in vials containing 50 cc. H. K. Mulford Co., Philadelphia, Pa.

Antipneumococcic Serum, Polyvalent.—Marketed in syringes containing 20 cc. Also marketed in vials containing 50 cc. H. K. Mulford Co., Philadelphia, Pa.

Antistreptococcic Serum, Polyvalent.—Marketed in vials containing 50 cc. H. K. Mulford Co., Philadelphia, Pa.

Antistreptococcic Serum, Scarletinal, Polyvalent.—Marketed in vials containing 50 cc. H. K. Mulford Co., Philadelphia, Pa.

Typho-Serobacterin, Mulford, Immunizing.—Each package contains three syringes of typho-serobacterin graduated as follows: First dose, 1,000 million killed sensitized typhoid bacilli; second dose, 2,000 million killed sensitized typhoid bacilli; third dose, 2,000 million killed sensitized typhoid bacilli. H. K. Mulford Co., Philadelphia, Pa. (Jour. A. M. A., Oct. 10, 1914, p. 1296.)

Cymar.—A neutral, non-glucosidal substance obtained from *Apocynum cannabinum* and *Apocynum androsaemifolium*. Cymar resembles amorphous strophanthin in its actions and is about equal to it in activity. It is more active when injected intravenously or intramuscularly than when given orally. Its uses are much like those of digitalis, but it is best suited in the form of Cymar tablets, 1-200 gr., and ampoules Cymar solution containing 1-60 gr. cymar. The Bayer Co., New York. (Jour. A. M. A., Oct. 17, 1914, p. 1393.)

Maltine Malt Soup Extract.—Maltine containing potassium carbonate, 1.1 gm. to each 100 gm., and alcohol, 3.88 per cent. Maltine Co., Brooklyn, N. Y. (Jour. A. M. A., Oct. 24, 1914, p. 1479.)

Acne Vaccine.—Marketed in packages of six syringes, each containing 12 million bacteria. Greeley Laboratories, Inc., Boston.

Acne Vaccine.—Marketed in packages of four syringes containing, respectively, 5, 10, 20 and 40 million killed acne bacilli. Schieffelin & Co., New York.

Colon Vaccine.—Marketed in packages of six syringes each containing 1,000 million bacteria. Greeley Laboratories, Inc., Boston.

Colon Vaccine.—Marketed in packages of two vials each containing, respectively, 50, 100, 200 and 400 million killed bacteria. Schieffelin & Co., New York.

Pyocyanus Vaccine.—Marketed in packages of six syringes each containing 1,000 million bacteria. Greeley Laboratories, Inc., Boston.

Pyocyno-Bacterin.—Marketed in packages of four syringes containing, respectively, 50, 100, 200 and 400 million killed bacteria. H. K. Mulford Co., Philadelphia, Pa. (Jour. A. M. A., Oct. 24, 1914, p. 1479.)

Antimeningococcus Serum (Antimeningitis Serum)—Marketed in one aseptic glass cylinder containing 30 cc. with special sterile needle and stylet. Also in one 20 cc. vial. Schieffelin & Co., New York.

Gonococcus Vaccine.—Marketed in packages of six syringes each containing 500 million bacteria. Greeley Laboratories, Inc., Boston.

Gonococcus Vaccine, Polyvalent.—Marketed in separate syringe packages containing, respectively, 50, 100, 200, 400 and 1,200 million killed bacteria. Schieffelin & Co., New York.

Pneumococcus Vaccine.—Marketed in packages of six syringes each containing 500 million bacteria. Greeley Laboratories, Inc., Boston.

Staphylococcus Albus Vaccine.—Marketed in packages of six syringes each containing 1,000 million bacteria. Greeley Laboratories, Inc., Boston.

Staphylococcus Aureus Vaccine.—Marketed in packages of six syringes each containing 1,000 million bacteria. Greeley Laboratories, Inc., Boston.

Strepto-Bacterin (Human) Polyvalent.—Marketed in packages of six ampoules each containing 100 million killed bacteria; also in packages of six ampoules each containing 200 million killed bacteria. The Abbott Alkaloidal Co., Chicago.

Streptococcus Vaccine.—Marketed in packages of six syringes each containing 500 million bacteria. Greeley Laboratories, Inc., Boston.

Scarlet Fever Treatment.—Marketed in packages of four vials containing, respectively, 50, 100, 200 and 400 million killed bacteria.

Typhoid Bacillus Vaccine.—Marketed in packages of six syringes, each containing 1,000 million bac-

teria; also in packages of six syringes containing, respectively, 100, 200, 400, 600, 800 and 1,000 million bacteria. Greeley Laboratories Inc., Boston. (Jour. A. M. A., Oct. 31, 1914, p. 1577.)

PROPAGANDA FOR REFORM.

Serobacterins.—While objection may be made to the sensitized living bacteria used by Besredka because there is always an uncertainty as to the action of living bacteria in the animal body, such danger cannot be attributed to the "serobacterins" because they contain dead bacteria, and so far as known, can do no more harm than other dead bacteria—in fact it is claimed that they are preferable to other vaccines because the toxic products of the bacteria, other than the immunizing properties, have been largely removed. It must be said, however, that these preparations are still in the experimental stage. In great part, careful clinical observations will decide that the serobacterins are really superior to ordinary vaccines. (Jour. A. M. A., Oct. 3, 1914, p. 1223.)

Lactic Acid Ferments.—There is a large amount of literature to the effect that the *Bacillus bulgaricus* hinders putrefaction in the intestinal canal. While there may be some questions as to a greater success in securing the implantation of this bacillus by administering it in "liquid cultures," the report of the Council on Pharmacy and Chemistry shows that such a culture is likely to reach the consumer in a more active state than one in the form of tablets. (Jour. A. M. A., Oct. 3, 1914, p. 1223.)

Agar-Agar Biscuits.—To make agar-agar biscuits it is only necessary to add finely powdered agar-agar to the flour used in making the biscuit. The amount should be, if possible, sufficient so that a dose of 5 gm. will be contained in each biscuit. (Jour. A. M. A., Oct. 3, 1914, p. 1224.)

Action of Sodium Cacodylate.—Containing its arsenic in organic combination and in the pentavalent state, which becomes therapeutically active only as it is reduced to the trivalent inorganic state, sodium cacodylate is so slightly toxic that therapeutic doses do not give rise to toxic symptoms. There is nothing in the literature to show that sodium cacodylate has a special action on the eye and blindness from its administration need not be feared. (Jour. A. M. A., Oct. 3, 1914, p. 1223.)

Glycothymoline Refused Recognition.—A report of the Council on Pharmacy and Chemistry cites Glycothymoline as a typical illustration of a "patent medicine" advertised to the public through the doctor. Different formulas have been ascribed to Glycothymoline by its promoters from time to time, but whatever the exact composition of this secret nostrum may be, it has been definitely shown that it is but a weak antiseptic solution. Nevertheless, the advertising circulars recommend the use of Glycothymoline in such serious conditions as diphtheria and ophthalmia of the newborn. Glycothymoline is in conflict with Rules 1 and 4 of the Council on Pharmacy and Chemistry, because of its indefinite composition and the method of advertising it to the public. It is in conflict with Rules 10, 6 and 8, in that it is an unscientific, shotgun mixture sold under unwarranted therapeutic claims and under a misleading name. (Jour. A. M. A., Oct. 10, 1914, p. 1313.)

Glycothymoline Not Harmless.—Glycothymoline is a mild antiseptic practically devoid of germicidal power and when used as a simple mouth wash is practically harmless. However, the recommendations to the public for its use in serious diseases make it a menace to the public health, and physicians are responsible for its widespread use. (Jour. A. M. A., Oct. 10, 1914, p. 1304.)

Declared Misbranded.—The Federal authorities have secured convictions under the Food and Drugs Act against the following "patent" medicines: Nurito, West Baden Sprudel Water, Radam's Microbe Killer, Dr. Hilton's Specific No. 3, Dr. Sullivan's Sure Solvent, Russell's White Drops. With the exception of the first two the products were declared misbranded chiefly because false and fraudulent therapeutic claims were made for them. Nurito was declared misbranded because false statements in regard to the ingredients were made, and West Baden Sprudel Water because it was not a natural water as claimed. (Jour. A. M. A., Oct. 17, 1914, p. 1408 and 1409.)

Phenolax Wafers.—These are tablets said to contain phenolphthalein 1 gr., "aromatics" and sugar enough to make five grains. It is a question what purpose the "aromatics" and sugar serve, perhaps these are to mislead the unthinking to believe that this combination has some mysterious value over phenolphthalein itself. (Jour. A. M. A., Oct. 17, 1914, p. 1410.)

Papine (Battell & Co.)—This is a simple aqueous alcoholic solution of morphin, one grain to each ounce. It is exploited under the utterly unwarranted claim that it does not nauseate, constipate nor create a habit. (Jour. A. M. A., Oct. 17, 1914, p. 1411.)

Celerina and Aletris Cordial (Rio Chemical Co.)—Celerina is a shotgun mixture said to contain, in addition to 42 per cent of alcohol, kola, viburnum, celery, eypripedium, xanthoxylum and aromatics. Aletris Cordial is said to contain 28 per cent alcohol (more than is found in wine) besides three obsolete and valueless drugs, aletris, helonias and serophularia. Whatever virtue there is in Celerina and Aletris Cordial is derived from the alcohol. (Jour. A. M. A., Oct. 17, 1914, p. 1411.)

Use of Paraffin Oil.—While it is recognized that cancer may be caused by chronic irritation, the paraffin oil used medicinally is bland and non-irritating, and there is no reason to suppose that its continued use would cause cancer. A good quality of oil may be obtained by prescribing Paraffinum Liquidum or Petrolatum Liquidum Grave. (Jour. A. M. A., Oct. 17, 1914, p. 1411.)

Hemo.—The Thompson Malted Food Company, Waukesha, Wis., which sells Hemo, Malted Milk and Malted Beef Peptone, offers its stock to physicians with promises of large profits. Hemo is advertised as "the food that builds up weak stomachs," and is stated to contain "the iron of spinach, the juices of prime beef, the tonic properties of selected malt in powdered form and the richest sweet milk." Hemo is "promoted" by absurdly extravagant claims and pseudo-scientific nonsense. Disregarding the question whether or not this is a stock jobbing scheme or whether the purchase of the stock is a good investment, physicians who buy the stock and prescribe the firm's output are not giving their patients a square deal. (Jour. A. M. A., Oct. 24, 1914, p. 1494.)

Ginseng.—Despite the fact that the peculiar man-shaped root of ginseng has no medicinal value so far as science can determine, the Koreans for decades paid their tribute to China in ginseng. In China it is reported as a cure for all ills that human flesh is heir to and has a special reputation as an aphrodisiac. Perhaps there is no better illustration of the virtues of aphrodisiacs in general than the fact that the Chinese are quite sure of the marvelous efficacy of ginseng, though no evidence of its virtues can be obtained in the West. (Jour. A. M. A., Oct. 24, 1914, p. 1486.)

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Atlanta Clinical Laboratory

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REPORT OF TWO CASES PRESENTING SYMPTOMS OF MUCOUS COLITIS.*

- (A) Re-section of Hepatic Flexure of Colon.
(B) Colectomy (Lane's Operation).

G. P. Huguley, M.D., Atlanta, Ga.

Report of the two cases herewith presented is made because in each case the usual symptoms of a mucous colitis were typical, and the pathological findings at the end of a series of operative measures showed that certainly in these two cases there was no nervous element present as a causative agent, and that the symptoms were based on actual pathologic changes. A rather thorough investigation of the literature of mucous colitis discloses that in practically every instance it is regarded as a secretory neurosis.

Certain peculiar coincidences applying to each case I wish to call attention to before relating each case in detail:

1. Each case presented primarily symptoms of digestive disturbance.
2. Each presented early in its history

definite symptoms of appendicitis, so much so in fact that in each case removal of the appendix was done, with only temporary benefit.

3. Each case presented what appeared to be a perfectly clear condition of cholecystitis; coincident with the symptoms of cholecystitis the digestive disturbances again became more marked and persistent; that in both cases the gall bladder was drained with only partial and temporary relief from symptoms.

4. Each case also developed a right floating kidney, and, as previously stated, coincident with this condition, a marked aggravation of digestive disturbances again occurred. A fact of further interest is that at this stage of each case the seizures became extremely painful, and recurred frequently during each 24 hours, necessitating the resort to the use of opiates for relief. The painful attacks finally became so intense and so frequent the radical operations below described were undertaken.

Case 1. P. V. Y., aet. 33. Teacher. Native of Germany.

F. H. Unimportant.

P. H. Only the usual diseases of childhood

*Read at meeting of Medical Association of Georgia, Atlanta, Ga., 1914.

until 1907 patient began to suffer with digestive disturbances persisting more or less constantly; when, in March, 1908, an operation for the removal of appendix was done by a well known surgeon of this city. Following this patient felt some relief for a time. However, in the early part of 1909 patient came to me complaining of symptoms much the same as formerly. Stomach analyses showed only slight hypercloydria. Dr. George C. Mizell saw patient with me from this time on, and directed the dietetic and medical treatment. Patient manifested only slight improvement under this treatment and presented very definite symptoms of gall bladder involvement.

In August, 1910, I did a cholecystotomy. This, with rest in bed, and the dietetic treatment following, gave partial relief for a time. In June, 1911, patient went to St. Simon's Island to spend summer. While rowing experienced sudden violent pain in right lumbar region. This persisted for some hours, and following this had frequently recurring attacks of similar nature. At this time pain became very severe and marked in right hypochondriac region. He returned to Atlanta in August, and on examination I found right kidney movable to third degree. I then did a nephorrhaphy. This resulted in no relief. However, from this time until June, 1912, patient was under constant observation and treatment, being practically confined to bed in St. Joseph's Infirmary. Stools always contained large quantity of mucous, and occasionally a trace of blood. Bowel movements were preceded by and accompanied with most intense pain. At irregular but frequent intervals patient would be seized with sudden severe abdominal pains in upper right quadrant of abdomen. During these seizures extreme rigidity of abdominal muscles was present, and did not subside until quite some time after relief from pain had been obtained. These attacks were making such marked impression upon patient's health, that finally, in May, 1912, exploratory operation was done. Right rectus incision made and entire abdomen explored. The ascending colon and hepatic flexure of colon was found adherent to coils of small intestines; the pylorus bound down in the mass, and pulled under the liver. The colon was adherent to inferior surface of the liver for 1½ inches. Adhesions were freed and thoroughly greased with sterile vaseline. As was expected, they promptly recurred, with in-

creasingly severe and frequent painful seizures as before. Finally, in July, 1912, another operation was undertaken; dissecting out the old scar in the right rectus muscle, the abdomen was opened. With much difficulty everything was freed and about twelve inches of the colon, including the hepatic flexure, was resected, and a side to side anastomosis done. After a stormy convalescence patient made a slow recovery, and today is entirely well. Since the last operation there has been complete relief from all disturbances previously complained of. Only occasionally stools showing slight trace of mucous. The appearance microscopically of the portion of colon removed showed a thickening of the muscularis, the peritoneal coat being stripped in many places in its removal. The mucosa was thickened and hyperaemic, and in places practically destroyed. No microscopic examination, I regret to say, was made.

Case 1. E. S. Female, age 59. Unmarried.

E. H. Negative, except for tuberculosis among two or three members of immediate family.

P. H. Negative, except for diseases of childhood.

Patient came under my observation in February, 1911. At this time symptoms all indicated a cholecystitis. Patient also had tenderness over the appendix, and a right floating kidney. Arterio sclerosis pronounced. Trace of albumen in urine, negative for casts.

On March 4, 1911, I drained the gall bladder and removed the appendix through the same incision, and did a fixation of right kidney. Forty-eight hours after operation patient had almost complete suppression of urine, with profound coma, lasting 48 to 72 hours. Her condition appeared hopeless, but she finally made a slow recovery. Only temporary improvement was manifested. Late in 1911, or early in 1912, the patient began to have frequent and severe attacks of abdominal pain, accompanied by extreme abdominal distention and loud eructations of gas. These attacks would last for several hours. Mucous appeared in the stools, and alternating constipation with mild diarrhoea was present. Stools frequently contained blood and were most offensive in odor. Free bowel movement would not give relief from pain. Dietetic and the usual treatment was begun and continued under direction of Dr. Mizell. Improvement was never marked or lasting. In June, 1912, difficulty in giving

enemata amounting to an obstruction developed. This proved to be due to an extreme retroversion of uterus. Against our advice the patient demanded that relief be given. In May, 1912, a suspension of uterus was quickly done, and an uneventful convalescence made, with complete relief from obstruction. From this time on, however, her condition grew worse. Patient lost in weight and strength. The seizures became more frequent and severe. About one year ago skiagraph with colon injection showed a dilated and displaced colon, with a distinct reduction in size of the colon toward the median line from splenic flexure. Exploratory laparotomy revealed condition shown by skiagraph due apparently to some atrophic condition of about four inches of the colon. An omental band completely surrounding the colon at the splenic flexure was found and released. The condition appeared to have been produced by this band. Relief in a small measure was felt for a few weeks. However, the attacks soon recurred more frequently and severely than ever, and oftentimes would persist for hours. Her suffering became unbearable and patient demanded some attempt at relief. She was told frankly that nothing known to us except complete removal of colon promised relief, and advised that such a measure would almost certainly be fatal. She demanded that it be undertaken, and, on January 7, 1914, the colon, including the caecum, was removed to the sigmoid, the ileum being anastomosed to sigmoid by side to side method. Long medium incision was made, ileum was clamped and severed by actual cauter. The only difficulty experienced was in getting the caecum freed by dissecting it out of its peritoneal coat. After this was accomplished, the mesentery was ligatured and severed, and the colon freed; practically no hemorrhage occurred, and at all times the situation was well in hand. The ileum was readily carried across, and a lateral anastomosis with the sigmoid easily done. Closure by usual method, operation lasted three hours. No shock, and patient reacted well. Pain following operation was to me astonishingly slight. Vomiting was rather severe and frequent. The only condition causing concern was the pulse, which steadily ranged from 120 to 130. On the fifth day bowels acted well and the indications were very encouraging. Bowels continued to act without much difficulty. Condition progressed favorably until the

twelfth day, when patient had quite a marked abdominal distention, with slight separation of the skin and sheath of the rectus. This distention was not due to gas. Temperature not above 100, and generally normal. Pulse ranging, as stated, from 120 to 130. At 2 a. m. on the morning of the thirteenth day patient had sudden and violent abdominal pain; $\frac{1}{4}$ grain of morphia was given hypodermically. At 6 a. m. temperature 102, pulse 130, respiration 34. At 9 a. m. temperature 98.5, pulse 140, respiration 26. Patient rational and appeared better, but the distention increased. At 9:45 p. m. patient had a voluntary bowel movement, which I personally examined. She grew rapidly weaker and died at 1:50 a. m., on the morning of the fourteenth day, the cause of which I do not know.

The microscopic appearance of the colon showed one quite large ulcer, with eight or ten smaller ones in the caecum. Dr. John Funke, pathologist, St. Joseph's Infirmary, kindly examined the specimen and furnished me with the following report:

Gross appearance. The specimen consists of a tube-like structure 92 cm. long. This is clearly a part of the large intestine. The mucous membrane is dull, dark red, swollen, and covered with a tenacious dark red, semi-solid substance. Scattered over the entire mucous surface are small, usually ovoidal, but sometimes circular, slightly depressed areas, ranging from four to five millimeters in diameter.

Histology. At many points the greater portion of the mucous membrane is gone so that the thickness of this structure varies a great deal. The epithelium lining the tubules where portions of the mucosa are denuded is nearly as well preserved as in other tubules where it is somewhat swollen, and the protoplasm is vacuolated. The intertubular structure is densely infiltrated with cells, some of which are small and round, with small, deeply staining nuclei. Other cells are large with abundant acid staining granular protoplasm, and small, round, deeply staining nuclei. Among these are cells which are large, have a very granular, brownish protoplasm, and a small, deeply staining nucleus. In the sub-mucosa there is considerable extravasated blood. The sub-mucosa is somewhat thickened. The muscle coat shows a slight increase in the amount of fibrous tissue. The peritoneal coat is thickened.

Diagnosis. There was present a hemorrhagic inflammation, with eosin of the mucous membrane. There is not much evidence of a chronic catarrhal enteritis, but there was present a chronic inflammation of the muscle and peritoneal coats.

It would not be proper for me to close without giving credit to the untiring work and assistance rendered in these two unusual and long drawnout cases by Dr. G. G. Mizell, Dr. W. A. Selman, and Dr. K. L. Reed. Without their valuable aid and assistance I could not have pursued them to their close.

PERFORATING APPENDICITIS—SURGICAL TECHNIQUE—AFTER TREATMENT.*

R. R. Kime, M.D., Atlanta, Ga.

In discussing this subject under the title of Fulminating Appendicitis, I wish to include perforating ulcer with peritonitis or abscess and gangrene of the appendix with peritonitis, all requiring drainage. The extent of surgical work in these cases will depend on condition of the patient, location and difficulty of finding the appendix, and other existing complications.

First we should keep in mind that McBurney's point does not always locate the appendix, but that it will more often be found under Lanz's point, yet sooner or later the pain and tenderness will in most cases be located at McBurney's point.

It is possible in some cases to diagnose a retrocecal appendix by the pain locating itself farther to the right and higher, and radiating up the back, and the point of tenderness being a little more to the right and a little higher. I have a case in hospital now so diagnosed and confirmed at operation.

If there is a large appendiceal abscess with marked fluctuation the incision may be made at the nearest point to reach the abscess cavity, but it is probably better and safer in all these cases to make the incision at Lanz's point, i. e., one-third the distance from the right to the left superior spine of the ilium near border of the right rectus muscle. This incision gives decided advantage, as it may be extended to reach the stomach, gall bladder, duodenum or pelvic organs.

The incision should be large enough to do good work without delay or unnecessary

handling of the intestines. It is essential not to handle or traumatise the intestines any more than is absolutely necessary, if we expect good after results and avoid ileus or extensive adhesions.

It is best if condition of patient will admit to remove appendix in all cases, but the research should not be prolonged indefinitely producing so much traumatism and shock, or opening up so much raw surfaces for absorption as to kill patient. By end of first week the adhesions become vascular, hence greater danger from absorption when broken up. Quick, efficient work is essential in these cases and no time should be lost in elaborate technique.

Do not flush out abdomen nor eviscerate patient to spread infection. Unnecessary sponging produces unnecessary traumatism. Free pus left in the abdomen or pelvis with free drainage is safer than traumatism.

Dr. Knott, of Sioux City, Iowa, operated upon 501 cases of localized abscesses, removing appendix in all cases, with six deaths—1.2 per cent.

Dr. Ross, Philadelphia (reports twenty-four cases of sub-phrenic abscess in which appendix was not removed at first operation. In last four years he has removed appendix in all cases.

Free drainage is essential, but extra incision and extra punctures are rarely necessary.

Remember that infection is absorbed far more rapidly in region of the diaphragm than in the pelvis, that gauze drains fluids only, and that for a short time, also that pus on tension absorbs rapidly. Free gauze has no place in the abdominal cavity except to check hemorrhage, then it should be surrounded, as far as possible, with gutta percha tissue. The surgeon who uses free gauze in these cases will pay the penalty in frequent fecal fistulae, more sloughing of the tissues and more liability of hernia following his work.

Large rubber drainage tubes; split, not perforated, and cigarette drains of gauze covered with gutta percha tissue should be carried into pelvis, retrovesical pouch, below cecum, in abscess cavities, as conditions indicate, and all brought out through the original incision, if possible.

Do not allow gauze in cigarette drain to come in contact with the intestines; best to cut end off even with the gutta percha tissue before introducing.

Close incision up to drain with layer catgut

*Read at meeting of Medical Association of Georgia, Atlanta, Ga., 1914.

also figure of eight silkworm gut, leaving the ones nearest each side of drain to be tied when drain is removed, if there has not been too much sloughing and infection requiring their removal sooner. The usual drainage dressing is applied. The rubber and cigarette drains are pulled up one-half to one inch each day and cut off; remove cigarette drain second or third day, keep rubber drain in as long as needed, cleansing or changing and shortening as rapidly as wound fills from the bottom.

As soon as one is certain the abdominal cavity is walled off, pour into wound or drainage tube at each dressing an iodine solution (Tr. Iodine ss. to 1³ Alcohol IV³ Water qs. VIII⁵).

If much pus or sloughing, sponge out with gauze or cotton in folds and fill in loosely around tube with gauze saturated in the iodine solution; keep wound well open and drained. Later, when bottom can be reached, substitute Rx. Thymol Iodide \mathfrak{z} i, Bismuth Sub. Nit. \mathfrak{z} ii, Olive Oil qs. \mathfrak{z} iv in place of the iodine solution, saturating gauze with oil mixture, and carry to bottom of wound and pour some in wound. It makes the wound heal more rapidly and with less scar tissue. The oil mixture is the best dressing for the skin surface from the first, especially when the discharge is irritating. Theory in the past condemned oil dressings, but I do not care a snap for theory if experience demonstrates its fallacy.

As soon as wound is free from sloughs or pus and not too deep, bring surfaces together with Z. O. plaster, tying the provisional sutures if they have not been removed, keeping the parts constantly coaptated. Slip small strips of gauze saturated in oil mixture up under plaster on line of incision, changing it daily. If fecal fistula be present, pack wound closer, give intestinal antiseptics, regulate diet and keep bowels moving regularly.

These details may seem commonplace to some of you, but they mean much to the patient in after results and when properly carried out secondary operations in these cases are rare. The after treatment of these cases is almost as important as the operation and should not be left to the interne unless he is well trained.

While adequate drainage, the Fowler position, proctoclysis and proper dressings are essential, constitutional treatment should not be neglected. Strychnia and digitalis are

given hypodermically as needed. Codea hypodermically to make rest, only one or two doses morphine if necessary. Iodine in large doses acts as an antitoxin and often does as well as streptolytic serum.

Quinine, 15 to 20 grains, once or twice a day, in the proctoclysis inhibits germ development, also the same amount of sulphonal acts as hypnotic and may be given together. Diuretic may be used in same manner.

Liquid peptonoids, granopeptones or panopeptones should be used in the proctoclysis as a routine in these cases as a food to sustain the vitality and increase the resistance of the patient. Nourishment given by mouth will depend on condition of patient, amount of nausea and vomiting.

The second day broths or egg albumen in small amounts may be given if patient is not vomiting. Liq. peptonoids \mathfrak{z} ii in little water with small doses of iodine or fruit juice acts well in some cases. Have bowels moved on second or third day, depending on the amount of distension, pain and nausea.

Phenolphthalein is pleasant to take. Given night and morning in a little fruit juice and followed with an enema of salts and glycerin in water, usually suffices when proctoclysis has been used. Calomel in small doses is needed in some cases. After bowels are well moved, liquid diet is given, then later soft diet.

My experience is that patients are more often overfed than underfed the first week after operation, increasing their temperature and disturbance of bowels.

DISCUSSION ON DR. KIME'S PAPER.

Dr. F. W. McRae, Atlanta: I do not know that I have ever heard a surgical paper in which there were so many points with which I take issue as in Dr. Kime's. I think he gives therapeutics undue prominence and Nature's remedies a poor show.

In the first place, I think the Lamb incision in abscess cases and in perforative and fulminating appendicitis exposes the peritoneal cavity very much more than do other incisions. It is unnecessary to make these large incisions in the fulminating cases and in the abscess cases. There is no time for exploratory laparotomy. These are not the conditions under which we should do exploratory laparotomies. We have one definite life-saving measure here, and we ought to do it as quickly and just as little

trauma as possible. I like the transverse incision which separates the deeper muscles and comes right out toward or near the anterior superior spine of the ilium right over the center of the pathology. This incision can be carried across the rectus sheath split, and you can get at the actual pathology through a smaller incision, it gives you a wider area of exposure, and an ability to work through this transverse incision better than any other incision.

As to putting in drainage, I agree with what Dr. Kime has said in regard to the use of gauze. That should not be done. It will cause a fecal fistula. The Lamb incision and the giving of so many drugs are the points on which I would take issue with him. He spoke of the use of iodine and antiseptics in these cavities. I find that healing takes place much better without the use of antiseptics; nor do I ever pack the wound. When my drain comes out, if there is any necessity for putting in a folded rubber tube, I use the Penrose covered tube or small split tube to get rid of it. I rarely have the prolonged suppurations I used to have when I packed. You can keep wounds open much longer by treating them with antiseptics and packing in gauze than they would stay open if you simply leave them alone. That is especially true of fecal fistula.

As to the point of always taking out the appendix, there are a few expert surgeons who may consider it wise to undertake this. I take out most of the appendices I operate on; I leave one occasionally, and I have never seen any other surgeon work who did not occasionally leave the appendix. It is wise to do it, and it is important for one who does an occasional operation to do a definite thing and give Nature a show. Since the transverse incision gives you drainage at the right point, put the patient to bed, not in the exaggerated Fowler position, but in the Fowler position turned on the right side, and deal with your drains as the conditions indicate.

Dr. T. J. Charlton, Savannah: I have enjoyed Dr. Kime's paper very much. It is along the right line, but he dwells too much on the medial side of the subject. The point is very simple, and that is to get in as quick as you can and get out with equal quickness.

As regards the incision, my rule has been to go over the prominence of the mass if it can be detected; otherwise for years I have used the Fowler or the Gill Wylie incision,

which is made through the outside of the rectus muscle, and I prefer it because you can make it as small as you please or as large as you please.

As regards the size of the incision, that is really not of very much importance. To make an incision of an inch and do your work is the sign of a clever surgeon, but it is not always good surgery. Sometimes you will find conditions where through a small incision you can relieve, and the smallest incision through which the work can be done thoroughly is the incision to make. At times it will take quite a large incision.

As regards drainage, I quite agree with Dr. Kime about gauze, and I think as large a tube as you can well put in, rubber tube, and no other drainage at all, is the best.

I had a case about two years ago that impressed me very much with the let alone theory. The man had a fulminating attack of appendicitis. I saw him, and within an hour after I saw him I put him on the table. The conditions were quite exaggerated; there was no trouble in cutting him and draining him, and everything went smooth until he came out of the ether and then he was a raving maniac. He threw himself about the bed in such a way that he had to be tied down. It was very hard to do anything with him, because no matter how we got him, he would break loose, and in that case I could not use proctoclysis, and all I could do was to wash out his stomach, and it took four people to do that; it took over four hours, and he came out all right, when his temperature dropped to normal. It was impossible to keep a dressing on the wound, as he would wriggle his body and tear off almost every bandage that was applied. In these cases I am impressed that drainage is the thing, and we have in the peritoneum a membrane which is most resistant to infection, and if you will simply give that drainage and let the drainage be thorough and put in a tube, so that it is amply large to keep the lips of the wound open, you will accomplish all that can be done by any method, and the drainage which Dr. Kime gave us is what I want especially to commend.

Dr. C. C. Harrold, Macon: While Dr. Kime was reading his paper, I made a note regarding the question of over-feeding. It is very important not to over-feed and not to over-drug, and right there I think it is a bad idea to put too many things in proe-

toelysis. If you put water in the gut, it is essential not to put anything in there that will irritate the gut. It is a bad idea to put food or quinin or any drug you are giving. Get them in in some other way or not at all.

As to the question of leaving in the appendix, Dr. McRae has already spoken of it, but there are times when it should be left in.

I operated on a man, 69 years of age, two or three weeks ago, for retro-cecal appendix with about a pint of pus. I did two things which, according to Dr. Kime, are wrong. I not only left in the appendix, but when I got through the right rectus incision, instead of continuing any operation through that incision I closed and drained through a stab-wound in the flank retro-peritoneally. He is getting along beautifully.

There is some difference of opinion with reference to a small and large incision. If you have a case of fulminating appendicitis that has not gone on to the formation of pus, you can remove the appendix without handling the gut.

Dr. J. D. Chason, Bainbridge: Unfortunately I have had quite a number of the cases of the type Dr. Kime's paper dealt with.

In reference to the incision in the right rectus muscle that will depend upon as to whether the abscess had extended to that point or not. When we remember that most books on surgery teach that in cases of abscess we should make our incision, as a rule, in the outer third of the rectus muscle to give room to work and drain, I do not believe in the majority of cases it is good surgery because we are so apt, even when we make large incisions, to get infection in the peritoneal cavity; whereas if the incision is made in the usual way, even in line with McBurney's point, you can make the skin incision as large as you want to. You can divide the muscle and you can close around the drain afterwards, if you can keep to the outer side of the abscess where there is no attachment to the outer abdominal wall. In other words, the parietal peritoneum with the omental adhesions usually cover the abscess, and you take a great risk in getting peritoneal cavity infected, especially where the abscess is of the retrocecal type or extends into the pelvic cavity. I had nine cases of that type last year without a death, and in no case did I make the opening in the rectus muscle. I made the opening near the

ileum, or as near as I could possibly make it, working my way and separating the muscles. These muscles will stand open when you put in the drain there; but I believe in packing with the gauze.

In reference to making an opening such as Dr. Harrold has spoken of and draining retroceally, of course that is beyond my skill how to make an opening through the flank and go into an abscess. I would not dare take that risk.

Dr. James H. McDuffie, Columbus: I am not a surgeon but assistant to one who is doing good work. I would utter one protest in these cases in regard to moving the bowels. I do not think it is good practice to do that before the fourth or fifth day, or to make any attempt to do it. The only bad result we have is in those cases where we have attempted to move the bowels too soon. We are more apt to have ileus or fecal fistula if we move the bowels too soon. We should leave them entirely alone for four or five days at the very least.

Dr. Kime, in Closing: The best surgeon in the United States, who has done more to advance this class of work, and has saved more lives than any other surgeon working alone, is Dr. Murphy of Chicago. Murphy says, make the incision at the border of the right rectus muscle.

As an illustration of this plan, but a short time since I operated on a case of fulminating appendicitis in which I could not map out the condition of the pelvic organs on account of pain and tenderness. The woman gave a history of having had a miscarriage three months previously. The case proved to be one of fulminating appendicitis with pus formation. If I had made any incision, as you say, over the region of the pus and drained one abscess, my patient would have died. I would have left other abscesses without being drained and my results would have been very bad in that class of work. We opened at the border of the right rectus muscle and found an abscess where the appendix was partially retrocecal. We separated the intestines till we found another abscess in the region of the right ovary. We separated the intestines until we reached another abscess in Douglas' pouch. Nobody could have made an incision and reached these abscesses with a mass as large as two fists in the center of the abdomen. We made an incision into that and found we had a

pregnancy of four or five months' duration. We cleaned out the uterus, drained the cervix, fixed it up in twelve minutes, but we did not remove the appendix. We did not make a prolonged search for the appendix, for to have done so would have killed the patient. Judgment is to be used in these cases. But if the surgeon can reach the appendix and take it out, the chances are the patient will get well and will not need to have a second operation. My experience has been that where I have followed this plan out and kept up drainage as instructed in these cases, I have never had to go back and operate the second time.

I have two cases waiting for the removal of the appendix and I expect in a few days to do other work besides taking out the appendix. The incision at the border of the right rectus muscle gives complete control of the situation. If you make the incision over the point of the abscess you may drain one abscess, and not reach the appendix, and there may be other abscesses in the pelvis you are not able to reach with that incision.

I do not advise packing the wound only under certain conditions, that is, after you have had drainage and the wound is slow in filling up and you can reach the bottom of it, then I carry gauze into it to keep the tissues in a better condition and give better drainage than can be accomplished with a tube.

Proctoclysis is essential in these cases, and the man that fails to use it will fail to use one of the most important things in tiding the patient through. In all these cases of severe infection we have a system that is overtaxed, and if you can do anything that will add to the vitality of the patient, it is your duty to do it, and by using proctoclysis you add to that vitality, or through the use of peptonoids or panopetons which will aid in resisting infection.

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POSTURE OF THE HUMAN BODY: ITS RELATION TO HEALTH AND EFFICIENCY.*

Fred G. Hodgson, M.D., Atlanta.

It is not possible, nor would it be profitable, to describe the absolutely normal and perfect human body. Two persons of widely different sizes and figures may be equally healthy and efficient. It is easy, however, to distinguish at a glance between a person whose carriage or posture is good and one whose carriage or posture is bad. One who walks with his head up, shoulders back, chest high and abdomen flat, presents a very different appearance from one who walks with his head drooping, shoulders forward, chest sunken in and abdomen protuberant.

Not only does one whose carriage is good (or in other words, whose posture is correct) have the appearance of greater health, strength and efficiency, but I wish to point out to you just why such a person must of necessity be more healthy and more efficient.

In a typical bad posture case the chest is flat and never properly expanded, therefore the lungs cannot perform their function properly and the blood is poorly aerated and the pulmonary circulation is not as free as it should be. The anterior chest wall presses against the heart so that it, too, must perform its functions under a handicap. Next we note that the diaphragm is largely attached to the thoracic wall. If the ribs show an increased angle downward, and the chest is narrowed from before backward, the diaphragmatic attachments must be relaxed so the diaphragm cannot perform its functions of support of the liver and expansion of the lungs in a proper manner.

In the bad posture cases the upper part of the abdomen is narrow in an antero-posterior diameter, and the lower abdominal wall protrudes, making the lower abdomen more capacious than the upper. This produces the most favorable conditions for visceroptosis. The liver has not its proper support from its diaphragmatic attachments and presses down upon the viscera below. The kidneys, which rest in pockets on each side of the vertebral column, are held in place by a properly shaped thoracic wall and well developed abdominal muscles, but they lose these supports when the thoracic wall

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is not properly shaped and the musculature of the abdomen is relaxed. The kidneys then become movable or prolapse. The stomach and intestines, both large and small, fall into the lower abdomen. This can be demonstrated by the X-ray. They then cannot perform their functions properly when so ptosed.

I have indicated to you some of the things which may and do occur in the human body when it is habitually used in a bad posture. This is especially true if the posture has been bad since childhood.

When a child first learns to walk his carriage is nearly always erect and good, especially if he is a normal, healthy child. If, however, he is handicapped by illness, weakness or poor inheritance, he is apt, early in life, to show signs of bad posture. Bad posture is especially apt to develop when he goes to school and is forced to sit at a desk which may be too high or too low, and in a seat which does not support his back; or he is kept indoors too long at a time and in badly ventilated rooms. He soon tires, his muscles relax and he begins to develop a bad posture. The same thing may occur in the home if the child is allowed to remain indoors too much, to read or practice at the piano for too long at a time in chairs or on a stool which does not fit the child.

Now in regard to the symptoms these bad posture cases develop. Their resistance is low because nearly all of their bodily functions are performed against odds. As I have indicated, lungs, heart, liver, kidneys, stomach and intestines are handicapped. The circulation in these organs may be interfered with, resulting in congestion. The bile ducts may be kinked or obstructed, causing the so-called attacks of "biliousness." The kidneys, falling down, may cause kinks in the ureters with pain in the hypochondrium or lumbar region and in extreme cases, hydronephrosis. The falling down of the stomach gives more or less obstruction to its properly emptying itself. This may account for the symptoms of indigestion these patients often complain of. This gastropsis may also account for the recurring attacks of cyclic vomiting seen in many children.

The constipation interferes with the emptying of the colon. There may be partial obstruction due to the sharp kink which is often noted at the hepatic and splenic flexures. This causes constipation with absorption of toxins from the colon. This, as

is well known, may cause innumerable ills, including various forms of the arthritides commonly called rheumatism.

Another symptom which may develop from continued bad posture, either in sitting or standing position, is backache. This is due to the constant strain upon the muscles of the back. When the body is properly balanced and poised, the weight falls over the great trochanters and there is the least possible muscular effort used in maintaining balance. When the body is carried in the stooped shouldered position, or when one slouches in a seat, the muscles of the back are put under undue strain, and this is eventually expressed in some form of pain in the back. If the upper end of the trapezii have been under strain, we have resulting an occipital headache or pain in the back of the neck. Lower down we may find pain between the shoulder blades, pain in the lumbar region, and still lower, the sacro-iliac pain. Bad posture with relaxed muscles and ligaments around the sacro-iliac joints is the most common cause of pain in the lower part of the back. The sacro-iliac joints become loose and may slip, causing severe and chronic backache. This joint may become dislocated, then we have very severe pain in the back and often the roots of the great sciatic nerve are pressed upon and we have most intractable cases of sciatica.

One might think from the many conditions which have been enumerated that I am attributing a large proportion of all human ills to a very simple condition, bad posture. That is not altogether the case, but bad posture may be and often is a large factor in very many of these ills.

Even mild degrees of bad posture, while not causing any distinct illness, may cause a decided lessening of one's efficiency. The human machine is very wonderful, complicated and delicately constructed. Let us for a moment compare it with our well known friend (sometimes enemy), the automobile. Suppose you take a new forty horsepower machine in perfect running order. It performs its functions normally, runs smoothly, and is a delight to run. Suppose this same machine, capable of developing forty horsepower, has a badly adjusted carburetor, has carbon in the cylinders and soot on the spark plugs, has an insufficient quantity of water in the radiator and that not circulating properly. You may start this machine and it may run, but when you strike a steep grade

you will find it is going to knock and skip and develop only half its normal power, and it is no pleasure at all to run it.

So the human machine, in order to develop its full power and be a pleasure to run, must be carried with head erect, chest high, shoulders back and abdomen held in, and muscles in best possible condition to maintain this attitude. When the body is properly used, there is a minimum of friction and consequently the efficiency of the individual is greatest.

Now, in regard to the treatment of these cases. The most important treatment is the prophylactic. As was mentioned above, normal, healthy children naturally begin to walk with a good posture. When a child first begins to assume a faulty attitude, that is the time to begin treatment. A young tree, you know, can be easily straightened or easily bent. The child's clothing should be adjusted so it does not tend to pull his shoulders downward or forward. When he goes to school we should know that his chair and desk fit him and properly support his back. He should not be allowed to spend long hours indoors slumping over a book, or practice long at a piano, sitting on a stool too high for him and having no back rest. If he has any defect of vision or obstruction to proper breathing, these should be attended to. He must sleep upon a firm mattress with no pillow and preferably out of doors.

The treatment of bad posture after it has become habitual must be by properly supervised exercises. The muscles which hold the head erect and the shoulders back and abdomen in must be developed. He must be taught to breathe properly. The abdominal muscles must be strengthened so that they hold the abdomen in and support the viscera. If the stoop shoulders are marked, he may not be able to hold his shoulders back and sometimes it is necessary to use a light back brace or plaster cast. The ordinary braces made of cloth or elastic are useless and sometimes harmful.

Much can be done to expand the ribs by having the patient rest in bed with a small, firm pillow placed under the lower ribs behind and the arms extended above the head. If the visceroptosis is marked, this can be benefited by resting in a Trendelenburg position, or the knee chest position, or lying upon a bed, face downward, with the shoulders resting on a chair lower than the bed.

I have spoken chiefly of the treatment of

children because this is the age when most can be accomplished, but adults well advanced in years can be greatly benefited by treatment along similar lines.

I realize that this paper is very incomplete, but in the time allotted one can only give an outline of the salient features of this very important and often neglected subject.

KERATITIS PARENCHYMATOSA.*

Maury M. Stapler, M.D., Macon, Ga.

Parenchymatous inflammation of the cornea is a distinctly characterized disease, usually beginning and running its course in a very typical manner. Exact knowledge of it is the more important because it must always be considered as a constitutional malady. Its appearance, therefore, renders it the duty of the physician to make an accurate and thorough examination of the patient, for, with the commencing Keratitis Parenchymatosa as the first symptom, there will almost invariably be found other symptoms pointing to a higher, to latent constitutional disease, in most cases syphilis hereditaria.

Of the names, all synonymous, keratitis intersticialis or keratitis diffusa would probably serve best for the equible, diffuse progress of the disease over the entire cornea, which is perfectly characteristic.

The disease usually begins in one eye, there appearing in some part of the cornea in a turbid, lusterless area, generally triangular in form, beginning usually at the periphery and thence extending to the center of the cornea.

The turbidity, observed with the naked eye, seems uniformly gray, but with a magnifying lens it is seen to be composed of a number of small, whitish flecks. To this turbid area first discovered, others are added which become confluent and finally implicate the entire cornea in the same manner. The cornea looks like a piece of glass which has been breathed upon or rubbed over with fat, and the deeper lying parts but shimmer through it or else are barely discernible. In differentiation from superficial keratitis it is important to note that the corneal surface exhibits no gross changes, no nodules, vesicles, etc., nor indentations, epithelial defects or ulcers. But with the lens we see

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the epithelium is raised up in many minute elevations equally distributed over the whole corneal surface, giving it a finely granular appearance.

With the development of corneal turbidity there begins an extensive vascular proliferation in its tissue. The new formed vessels extending from the marginal network stop at the limbus or pass just into it, forming a reddish plaque around the cornea. The deeper lying episcleral vessels, on the contrary, frequently push into the deeper corneal strata, their advance being always a little behind that of the corneal capacity, with whose progress, however, they advance further. When the malady is more violent, the vascular growth is steadily forward until the entire cornea is finally of a dirty, raw-meat hue. These blood vessels have a very characteristic appearance. The branches run directly and parallel toward the center, thus resembling the hairs of a brush.

Simultaneously with Keratitis Parenchymatosa, there appears a more or less noticeable involvement of the uveal tract, varying from a simple hyperaemia of the iris to an intense irido-chorioiditis. If, in this state, there be no artificial dilatation of the pupil, intense cases will develop posteria synechia and even occlusion of the pupil. Even after frequent instillations of atropine the pupil shows a disposition to contract. Chorioiditis would probably be considered one of the most frequent phenomena accompanying keratitis parenchymatosa, did not the opacity of the cornea rapidly interfere with ophthalmoscopic examination.

In some cases alterations of intraocular pressure occur, it being occasionally lowered. Increase in pressure is rare, and develops only after long continuance of the disease. Vision in this affection is always considerably lessened. Generally, the coarsest print cannot be read and only motions of the hand are recognized. Both the testing of vision and the examination of the eye are hindered by the often violent photophobia and the accompanying profuse lachrimation of the affected eyes. In the initial stage of the disease, there are often strikingly few subjective symptoms and no pain, but later there is sufficient pain, though if the disease be properly handled, the pains are not intense. Photophobia, as a rule, troubles the patient most.

To the disease syndrome, with its complications, above described, may be added,

according to the intensity of the inflammation, a number of variations, but the disease commonly presents enough of the characteristic symptoms to make diagnosis easy. As contrasted with a superficial keratitis, one should note that here we have no ulceration and almost never any gross elevations of the corneal surface, so that in keratoscopic observation, though the contours of the circles be not sharply defined, they are still concentric and circular. Furthermore, the general habitus of the patient aids in the determination of an extremely important differential diagnosis. Superficial keratitis is, usually, a symptom of the scrofulous constitution with its nasal troubles, eczemas, glandular affections; parachymatous keratitis is commonly a symptom of hereditary lues.

Keratitis parenchymatosa almost always attacks both eyes, not always synchronously but with a short interval of time between; more rarely there are intervals of weeks and months. The disease usually develops between the sixth and eighteenth years of life. Exceptionally, individuals over twenty years of age have been attacked, and these cases, as a rule, run an atypic and milder course, and with them in rare instances one eye alone may be affected. The disease commonly appears in pallid, unhealthy children who appear badly nourished.

Etiology. The disease is never a local affection. Formerly it was classified as keratitis lymphatica seusecropholosa and Hutchinson was the first to declare it due, as a rule, to hereditary lues. At the same time he called attention to another symptom often found with it and considered as a certain indication of existent hereditary syphilis, viz.: Hutchinson's teeth. By Hutchinson's teeth we mean a dental form where the two middle upper incisors of the second dentition have, instead of a straight cutting edge, a half-moon notch or indentation and converging sides. This notching of the free margin of the tooth is commonly observable up to the twenty-fifth year, after which the corners are broken or worn off. With this typical form are often found other dental abnormalities, e. g., abnormal smallness of the canines, wide intervals between teeth and irregular location and formation of the teeth in general.

Such teeth are not to be confused with rachitic teeth, in which we find horizontal furrows and ridges and defective enamel.

With the two symptoms described, the in-

terstitial keratitis and the Hutchinson's teeth, there is most frequently associated a third, viz., hard hearing; and this, as a rule, without objective clinical cause. The three phenomena form the so-called Hutchinson triad, and they diagnose absolutely the existence of hereditary syphilis.

Arlt and Foster have called attention to a frequently occurring affection of the knee-joint, either preceding or following the disease.

Recently, more attention has been given to the frequent occurrence of articular troubles in hereditary syphilis. According to Fournier, these were found 82 times in 212 cases.

The knee is most often affected, then the elbow, more rarely other joints. The articular inflammation generally precedes or develops with the interstitial keratitis, seldom following it. The articular trouble often develops on both sides of the body.

We are concerned here almost invariably with serous effusions into the joints, usually sequent to moderate, drawing pains and beginning without fever or with but slight elevation of temperature. According to Fournier, these articular troubles are dependent upon affections of the bones, while other syphilographers hold that they may be *primar* ysynovites.

We should also note the state of the lymph glands, the peculiar formation of face and skull, the often sunken nasal bridge, an ozena perhaps present, blenorrrhea of the lacrimal sac, rhagades at the corners of the mouth or over the entire face, etc. Together with the objective findings, the anamnesis is important. Inquiry should be made concerning a possible earlier infection of the parents, whether premature or dead children preceded the birth of the patient, whether many children died in infancy, etc.

Often a glance or two will establish the diagnosis; often the most careful investigation and examination are necessary. There will always be cases where hereditary lues cannot be considered. In such cases other diseases are etiologic, such as scrofula, chlorosis, and, above all, tuberculosis. Of rarer etiologic factors, we may mention articular rheumatism, and finally, malaria and influenza.

Course. The disease runs a very slow course, its briefest duration being several months and it is often six months or a year before the inflammatory phenomena subside and the opacities clear up. As an average

we may reckon on a half year. It is, therefore recommended that the physician inform the patient of the possible duration of the disease and admonish him to cultivate fortitude. And likewise, when the disease begins in one eye, the patient should be told of its rapid appearance in the other, lest he be terrified at the new outbreak, and also that he may not become suspicious of the therapy employed.

The prognosis, despite the fact that no medical assistance can abbreviate or arrest the disease, is relatively favorable. Even after long duration, the corneal opacities usually clear up, the process commonly beginning at the margin so that the center of the cornea is the last to clarify. As a rule, the eye regains a fair or at least endurable degree of vision and rarely are there any dense opacities left.

Therapy must be local and constitutional. In the beginning, warm, moist compresses commonly mitigate the symptoms of irritation and inflammation. The compress is made by placing a large, moist piece of absorbent cotton over the eye, then some gutta-percha tissue, followed by a gauze roller to keep the compress in place. Renewal of the dressing once or twice daily may be indicated. Another method of attaining the same result is frequent irrigation or bathing of the eye with warm water. The warm, moist compress is particularly serviceable at night when a permanent bandage is required. The best solution with which to moisten the cotton is a 2-4% boric acid, the ancient household friend, chamomile tea, is less cleanly and apt to carry dust particles into the eye. As soon as iridic involvement is noted—and this is seldom absent—the first and most important measure is the repeated instillation of atropin (1%) until the pupil dilates fully, a procedure which must be again practiced later in the disease. If these measures be neglected, posterior synechia, possibly complete occlusion of the pupil, will surely ensue, and the eye will be permanently and seriously injured. Furthermore, the eye should be well protected against the light by moderate darkening of the room, and later by a sun umbrella and protective eyeglasses.

If the inflammation has subsided, we endeavor to clear up the opacity by irritant measures, such as the insufflation of calomel powder or massaging with yellow ointment, which I saw at the Berlin University clinic.

As already emphasized, it is extremely im-

portant to note the general constitution of the patient. In feeble individuals a roborant diet is indicated (good food, eggs, meat, etc.), and iodine preparations are particularly desirable (iodide of iron, cod liver oil with iodine). In the later stages, living in the country, in good air, is to be strongly recommended.

In the numerous cases where hereditary syphilis is etiologic, this, naturally, should receive first consideration, using the ordinary remedies, mercury and iodide of potash. Later, I have gotten brilliant results by injecting neo-salvarsan twice a week, and for mild cases cacodylate of soda.

If tuberculosis be the specific cause or contributes to keratitis parenchymatosa, the nutrition of the patient should be first attended to. Internally, creosote or its active principle, guaiacol, which is less unpleasant to the taste and better borne, is recommended. Tuberculosis cases require nutrition, open air, etc.

Malaria, of course, demands the administration of quinine, and in the various forms of rheumatism, treatment by sweating, together with sod. salicyl., aspirin, or light-baths.

REPORT AND EXHIBIT OF A CASE OF TAENIA NANA.*

J. B. Ward, M.D., Macon, Ga.

This patient, a colored boy, age 10, was first treated by me about midsummer, when he complained of vague symptoms of nervousness, slight epigastric pains, muscular weakness of the lower extremities, slight diarrhoea and nausea, and a general weakness, being unable to exert himself much without stopping for rest. At that time he showed a malarial infection which yielded promptly to quinine. This was followed by a simple tonic. The above symptoms continued and the patient's condition grew worse. The mother of the child reported that at times, after walking a short distance, he would give out, so to speak, in the calves of his legs and in the small part of his back, would fall down and would have to be carried to the bed. About this time there was a decided increase in his appetite.

I suspected an infection of the uncinarius. Upon an examination of the feces the ova

of the taenia nana were found in great numbers. He was given calomel and santonin, later santonin and thymol, but no worms were found in the feces until male-fern was given, when they were found in immense quantities. A careful search failed to reveal the heads of the worms. A second dose of male-fern was given and recently kamala has been given with gratifying results as to the number of worms, but still no head has been found.

At present the patient is rather weak, exhibits a dyspnea, muscular weakness and tremor after exercise, and has a shambling, shuffling gait, somewhat similar to an ataxic gait.

The taenia nana or hymenolepsis nana was first found in 1851 by Bilharz in the ileum of an Egyptian boy. Since then it has been found in some of the European states, in Egypt, Japan, Siam, Brazil and recently in the United States along the Gulf coast. In Sicily it is claimed that 10% of the children are infected with it. The intermediate host has not been fully agreed upon. The infection is generally believed to be carried from the rat or some form of insect. Grassi regards it as identical with the taenia murina, which is found in the intestine of the rat, but this view is not universally accepted. Strumpell believes that the cystercercus is the snail. Wood claims that the rat is the intermediate host, but that this extra cycle can be dispensed with and an antoinfection with the formation of a cystercercus may take place. Secondary infection from person to person may also take place, since Ransom reports that out of 105 cases 38 were inmates of public institutions.

The worm itself is not often found in the feces unless some taeniicide or cathartic has been given. The ova, though, are easily found. The worm is 5 to 20 mm., or about one-half to three-fourths of an inch in length, with a maximum breadth of seven-tenths mm. The head is small and globular, has four suckers and a row of twenty-four to twenty-eight hooklets surrounding a retractile proboscis. The body, small near the head, increases in breadth nearly the entire length to the tail, where it tapers slightly. In the mature worm it contains 150 to 200 segments with genital pores on the left. The uterus is not branched, but is single and in the ripe proglottides filled with ova, thirty to thirty-seven micra in diameter. The ovum is filled with granulations and has two distinct shells,

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the inner one presenting at each pole a more less distinct projection provided with filamentous appendages. Occasionally the six hooked embryo can be found in the ovum.

PERNICIOUS MALARIAL FEVER.*

Thomas D. Coleman, M.D., Augusta.

The qualifying adjective "pernicious" is more convenient than accurate in characterizing malarial fever. Similar qualifying words are used in describing other diseases, e. g., malignant scarlet fever, black smallpox, etc. In the disease under consideration some authorities say that any malaria that kills is pernicious (see proceedings on the Canal Zone Medical Association). This must strike one as artificial, since many cases of quotidian, tertian, quartan and chronic malaria die, sometimes from ignorance, sometimes from neglect, sometimes in spite of the most enlightened treatment. Per contra many cases of unquestionable malarial fever get well—it may be through strength of constitution, by unusual though unskilled care, or by the skillful direction of the medical attendant.

In the discussion of this phase of the irrigation question and its value to the country we can have in view only the same end, whether we are scientists, statesmen, philanthropists or all in one; namely, the welfare of man. The furnishing him with lands from which he can earn a living is only a part of the problem. The larger part consists in protecting him from disease and making him capable of earning a living, for it is evident that if he is physically depleted and incapable of work, however fair the land may be with its richness of soil and balminess of air, its plenteousness of sunshine and its quota of rain, no harvest may be expected unless man is physically and mentally equal to profit by these blessings. Malaria has, throughout the ages, been a bar to man's progress. It has curtailed achievement and throttled ambition. From the fact that it occurs for the most part in tropical and sub-tropical countries, it has branded people of these sections as lacking ambition, lazy and more or less purposeless; and in this direction is only rivaled by the hookworm. High temperature unquestionably diminishes one's ardor for work, but it is beyond doubt that a

good part is due to malaria and hookworm.

In reference to malaria a few generalizations are germane. Originally, as the name implies, the disease was considered as due to bad air. A miasm arising from moist ground and especially after nightfall was ascribed as the cause. The human race sometimes inherits, sometimes simply accepts, sometimes stumbles over, its wisdom, and so it holds in this instance. Miasm such as it is or may be arises from the earth in the day as well as in the night, and in the North as well as in the South; but in temperate and tropical regions the careful examiner notes the presence of an ubiquitous and pestiferous insect—the mosquito—which is, so to speak, a night Rambler. For the sake of brevity I may state that from all obtainable information up to the present moment malaria is produced by the bite of a mosquito which has bitten someone afflicted with malaria and from no other source—not from food, not from the drinking water, not from the air.

Since the mosquito can only breed in stagnant water, the plain solution of this question lies in the efficient drainage of pools and marshes or petroliizing those that cannot be drained and in isolating the affected individual.

Carter has drawn attention to the fact that two hosts are necessary to the development of malaria—one, human; and one, insect.

If every individual developing malaria could be securely isolated, "malarial fever" would inevitably cease. Likewise, if every pathogenic anopheles could be annihilated or incarcerated, malarial fever would only be a matter of history. These two propositions may be considered as axioms or self-evident propositions and the methods of their carrying out will not be considered in this paper.

It is only through lessons thus learned that the completion of our Panama canal was made possible, and I believe that history will give as much credit to the medical department as to the engineering department of the United States army in the completion of this eighth wonder of the world.

Malaria in a large percentage of cases is a disease long drawn out and in many instances chronic. It is spread out over a large portion of the South and in late summer or autumn extends well up into the middle states. Indeed, wherever the infected anopheles is found and he can find malarial

*Read at Meeting of National Drainage Congress, Savannah.

blood upon which to feed, the disease will spread.

In our Southland malaria exists to such an extent that the disease and region suggest each other. At the mention of the South the idea of malaria occurs to one. It is not literally just, but human nature is prone to hold first in view the disagreeable things in our character and our country.

Malarial fever is the most widespread of the infectious diseases. In the eastern hemisphere it occurs as far as 62 degrees north. In the western as far as 45 degrees north. Mountainous countries are for the most part exempt. "As the equator is approached we meet less often with the benign forms of the malarial infection the prevailing forms being the severe and often fatal aestivo-autumnal infections." Malaria occurs in its pernicious type along the low regions of our coast line and in swampy regions.

Pathology.

In pernicious malaria the brain presents marked pathological lesions. Externally the blood vessels are much congested, the entire organ appearing hyepaemic; small capillary hemorrhages are observed, and oedema is the rule.

Minute hemorrhages also may be observed in the substance of the brain.

"The congestion and hemorrhages are due to blocking of the capillaries by malarial parasites, which may be observed in various stages of development within the red cells, together with an immense amount of pigment and numerous pigmented leucocytes." (Craig: Osler's System of Medicine.)

The liver, spleen and kidneys bear the stress of the strain, in pernicious malaria, next to the brain. According to Craig, "It is safe to say that in most cases pernicious malaria is accompanied by an acute parenchymatous nephritis.

Any of the malarial organisms may at times produce pernicious symptoms.

The most pernicious attacks occur in patients who have suffered repeatedly from malarial paroxysms that have not been treated properly. Bostoinelli and Bignani considered that the chief causes for development of the pernicious symptoms rest in the localization of the parasites in the brain or in other important organs, and also in the number of parasites present.

It is especially interesting in this connection to consider whether this clumping in the

cerebral vessels is not due to the fact that their lining cells have been devitalized by the action of the toxins secreted by the malarial parasite.

Classification.

I see nothing to be gained by subdividing the pernicious types into endless groups according as one symptom or another predominates. I believe that pernicious malaria as we recognize and accept it, is an acute exacerbation of a chronic process. It is thinkable that in acute infections the blood may be much disintegrated and the cerebral functions perverted; but in a practice of nearly a quarter of a century I have never encountered a case of pernicious malaria which did not give a history of having had malaria before.

If one will study the symptoms closely a sufficiently wide subdivision could be embraced in three forms and under these all others may be included, viz.: The (a) comatose or congestive type, (b) the algid or choleraic type, (c) the hemorrhagic type or as it is commonly called black water fever.

The comatose type: In this type the patient is stricken suddenly, losing consciousness, the face being suffused, pupils contracted, the pulse full and bounding, the respiration accelerated and often stertorous, and the temperature ranging from 101-105. Except for the temperature, pupils and pulse, the symptom complex is strongly suggestive of apoplexy. So that some have styled it the congestive or apoplectic form of pernicious malaria.

It may be said here that the color of the skin and size of the liver and spleen even in the absence of a history may aid one in his diagnosis. Naturally the blood examination will settle the question unless the patient has been taking quinine on his own initiative or under advice.

In the algid form, the onset is less sudden. After one or more paroxysms the characteristic symptoms develop—these are symptoms of profound collapse. A history of one or more malarial paroxysms is obtained from the patient; the ushering-in chill is absent or not so pronounced as in the acute forms of the disease; along with the collapse the patient presents much of the picture encountered in cholera; the cheek bones stand out prominently, the lines of the face are drawn, the eyes are sunken, but abnormally bright; the respiration is accelerated, the nostrils

dilated, the lips and fingernails cyanotic, the pulse rapid and easily compressible, the tongue is coated; but the mind, curiously enough, is abnormally clear and remains so until the end. In another paper presented by me before the American Medical Association in 1909 on *algid malaria* I made the admission that my mortality in these cases was 100 per cent, and I must admit with humiliation that I have not been able to improve my record.

In *hemoglobinuric fever*, or as it is more commonly called, *black water fever*, as in the other two, there is a history of previous attacks of malaria. The ushering-in symptoms are characterized by a severe initial chill, high temperature, ranging from 103 degrees F. to 106 degrees F., sometimes lower, sometimes higher; headache, pain in the back and limbs, nausea and vomiting. Jaundice is common, and the urine is dark, due to the contained hemoglobin, from which the disease gets its name (*black water fever*). Indeed without this sign one would not be justified in classifying the disease. The color has been described as light claret, port wine or black coffee, depending on the amount of hemoglobin contained. It should be noted here this is a distinct hemoglobinuria as contrasted with the hematuria of yellow fever. There may be in addition a yellowish discoloration due to the presence of bile; albumen and casts may also be present.

It would be extremely interesting to know just what property it is that causes clumping of the infected corpuscles in the case of the congestive and *algid* types in the neighborhood of the heat regulating centers, or what it is that determines the development of such a strong haemolytic action as one finds in *black water fever*. Two facts stand out prominently, previous malarial attacks and residence in a malarial section; and in all the aestroautumnal parasite is found. These three varieties are the most fatal of the cases of malaria, and if time permitted it would be interesting to study them more in detail.

In the treatment quinine is the sovereign remedy in the comatose and *algid* forms of the malady, and may be given to its physiological limit, either by mouth, injection or hypodermically. It is one of the few drugs we possess which may be classed as a specific. Strangely enough it is not of avail in the hemoglobinuric type of the disease, but on the contrary seems to increase the hemolysis

and diminish the patient's chances of life. Mannaberg gives the following rules of treatment:

1. When without quinine preceding, hemoglobinuria occurs and the blood examination shows the presence of malarial infection, quinine is undoubtedly exhibited.

2. When the hemoglobinuria after one dose of quinine, while the anamnesis shows that the patient previously took quinine with bad effect, and the parasites are present in the blood, quinine is also to be exhibited. If a paroxysm of hemoglobinuria should follow within a few hours, the repetition of the drug should be made dependent upon whether or not the parasites have in great part disappeared. In the former case the quinine may be stopped, at least for a time. But if the blood examination shows that the parasites have increased in number the quinine is to be continued.

3. When the anamnesis shows that the patient suffered previously from hemoglobinuria following quinine and the blood examination is negative, quinine is to be absolutely avoided.

4. When a case manifests a severe malarial infection (numerous parasites on examination) and at the same time an assured intolerance of quinine in the shape of hemoglobinuria the decision is very difficult.

Marchiafava and Bignoni believe that the only guide indicating to the physician whether to give or withhold quinine ought to be the result of a blood examination.

Bostonelli's canon is as follows:

1. If a hemoglobinuria occurs during a malarial paroxysm and parasites are found in the blood, quinine should be given.

2. If parasites are not found in the blood, quinine should not be given.

3. If quinine has already been given before hemoglobinuria has appeared and no parasites are found, its use should be suspended; but if parasites persist its use should be continued.

Thayer states his rules, modified from Bostonelli's, thus:

1. If the attack occurs spontaneously with a malarial paroxysm, the blood showing the presence of parasites, quinine should be freely administered hypodermically or intravenously.

2. If the parasites have disappeared, either as a result of the paroxysm itself or of doses of quinine already given, it may be well to abstain, at least for a time, from

the administration of the drug. It cannot ameliorate the further course of the paroxysm, and the possibility, if it has already been given, that the symptoms may be in part due to quinine, may be thought of.

3. If an attack arise in the middle of an ordinary malarial infection after taking quinine, it is best to abstain, for a time, anyway, from the further use of the drug. That which has been given may be enough to control the affection.

4. If, however, in an attack coming on after quinine, the parasites continue to develop, quinine should be again administered, despite the slight possibility of its injurious action. The dangers from the further development of the parasites are probably the greater.

5. In post malarial hemoglobinuria quinine is, of course, useless.

The following rules of Vedy are practical:

1. If living parasites (not merely evidence of their former existence, pigment) are detected twenty-four hours after the beginning of the attacks, 80 centigrams of salt of quinine may be injected subcutaneously.

2. If the parasites are not visible, do not administer quinine.

3. If in doubt, that is to say, if the microscopic examination of the blood cannot be made, do not give quinine.

It may be seen that the authorities quoted lay great stress on the presence of the parasites as a guide to the administration of quinine. The writer, however, cannot agree with those who hold that quinine should be administered in every case where microscopic examination shows the presence of parasites. It has been shown conclusively that parasites are present in a very large proportion of cases examined early. It has been shown that in an equally large number of cases the parasites disappear spontaneously. In these cases quinine is, to say the least, superfluous.

THE SECRETS OF SUCCESS.

There is no royal road to medical learning nor to success in the practice of medicine, but thoughtful consideration of the conditions of practice and of the methods of successful practitioners, leads to the belief that two general rules for use in practice may be formulated, and that any physician who mixes these rules with hard work, will achieve permanent and substantial success.

Rule One: Make Thorough Examinations. One of the most difficult acts of visualization is to see ourselves as others see us. If we could mingle incognito with our patients, like Haroun Al-Rashid among his subjects, we would hear many valuable criticisms and comments, and the things we would hear most often would be in regard to examinations: "He gave me a good examination," or "He didn't seem to take much interest in my case, for he hardly examined me at all." Now this attitude of our patients toward us is exactly the same as that which we assume toward any other artisan. When we call in the plumber or carpenter or garage man we expect them to make sufficient investigation to locate the trouble, and this is what the public expects of the artisans called doctors.

The physician who proceeds in a calm, quiet way to make a proper examination inspires that confidence which is the best and only legitimate form of psychotherapy. It is not necessary that the examiner have at his disposal a complete laboratory equipment as the majority of the facts concerning any case may be ascertained by careful use of the equipment given us by Nature, the hand, eye, ear and understanding. If the doctor will use these natural instruments of precision to the fullest extent possible, he will never be placed in an embarrassing position by any other physician to whom the patient may resort.

Rule Two: Tell the Truth, the Whole Truth, and Nothing But the Truth. Having made a thorough examination, tell the patient exactly what you find. This rule may be regarded as one of the perquisites of the legal and theological professions, but it may also be adopted by physicians as a practical guide in talking to patients or their friends. Physicians frequently violate this rule from altruistic but poorly-judged motives. Some serious disease is discovered and the doctor "hates to scare the patient," but tells some friend or keeps the knowledge to himself. If he tells anyone, it is certain that the patient will soon be told, and the patient naturally says, "Why didn't the doctor tell me," and has no further belief in the doctor's veracity. If the doctor keeps his knowledge a secret, it is a certainty that the true condition will be revealed in time, much to the discredit of the physician who, it is believed, failed to make a diagnosis. At other times the physician does not tell the truth because it will reveal some previous mistake on his

part. It is not necessary to point out the futility of such a policy.

The second part of the rule advises us to tell the whole truth. This not only reinforces the first part, but should lead us to reveal all the facts in our possession. This applies especially to prognosis, concerning which, the whole truth should be told; what is to be expected as to the course of the disease, what precautions are to be taken by the patient, and what further advice from consultants or specialists should be secured.

The last part of the rule is the admonition to tell nothing but the truth. This is excellent advice to those physicians who practice differential diagnosis aloud. There is nothing to be gained by telling the patient the large number of pathological queries which enter the mind of the examiner. To say that "you may have this" or "there are symptoms of this, that and the other thing," is not telling the truth and leads to confusion and distress in the mind of the patient. Patients want to have confidence in their doctors; they want certainty, not differential diagnosis.

We have been assuming that a good examination has been made and that the exact pathology has been located. But what shall the doctor say when he encounters the frequent contingency of not being able to make a diagnosis? Well, the rule still holds good; tell the truth. An honest expression of ignorance is always better than a guess and is followed by no unpleasant sequelae. It is well to explain that there is not sufficient evidence present on which to base a diagnosis, that continued observation of the case will probably result in certainty in a short time, or if the patient prefers, counsel may be called.

Keep in mind these two rules. The physician who follows them has pleasure and profit in his practice, and, best of all, he enjoys the respect of those discriminating critics, his fellow workers in the medical profession.—Mirror, Fayette County (Pa.) Medical Society.

THE TREATMENT OF PELLAGRA.

Carl Voegtlin (Journal A. M. A., Sept. 26, 1914), presents the treatment of pellagra from the point of view of the pharmacologist and the biochemist. Both are necessary, he says, for a clear understanding of the processes of nutrition and metabolism. He remarks that in the milder cases of this dis-

ease the symptoms will almost all disappear in a relatively short time if the patients are kept at rest on a liberal mixed diet with plenty of fresh meat. The difficulty lies in the fact that pellagrins are usually mentally defective and refuse to follow the directions of the physician unless convinced of its absolute necessity to their recovery. Consequently, psychotherapeutic methods must also be used to succeed with the dietary treatment. Relapses have been known to occur after patients have been exposed to the same conditions which caused the disease to be contracted primarily. The diet should not be reduced in case of diarrhoea, and constipation is affected favorably by increasing the fats in the diet. As to the treatment by drugs, he remarks that Lombroso advocated arsenic as a specific in this disease, but in this country it has not met with such good results and its benefits have been denied. He calls attention to the fraudulent advertising of proprietary pellagra medicines throughout the South, these preparations being without any real value in the treatment. The patient must be cautioned to keep out of bright sunlight as much as possible. Voegtlin believes that this disease is caused by a chronic intoxication produced by certain vegetable foods used to the extent of a dietary deficiency. In experiments with animals, fed on an exclusive diet of corn, carrots, sweet potatoes, etc., it was found that they developed within three or four days, gastro-intestinal symptoms indicating an intoxication and resulting in death in a remarkably short time. Extracts of these vegetable products, fed or injected into these animals, produced the same symptoms. It was discovered that relatively large amounts of aluminum compounds were present in these vegetable products. Toxic effects from these salts have been observed in both man and animals. Lessening the amount of vegetables ingested and adding eggs and meat to the diet relieves the injurious action of the vegetables on the alimentary canal. Voegtlin summarizes the causative elements in this disease as follows: A deficiency or absence of certain vitamins in the diet; the toxic effect of some such substance as aluminum, occurring in certain vegetables; a deficiency of the diet in certain amino-acids.

In Mitchell county the hookworm experts examined over 700 people, of whom 500 were found to be infected and received treatment.

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NEWS: Our readers are requested to send us items of news of a medical nature, also marked copies of local newspapers containing matters of interest to physicians. We shall be glad to know the name of the sender in every instance.

NOTICE.

All County Societies should hold their annual meetings during this month.

Elect officers, collect dues, and report to State Secretary at first of incoming year.

Blanks for making annual reports have been forwarded to each County Secretary.

DELAYED PAYMENT OF DUES.

A number of those who have been members of County Societies delay payment of dues until late in the year.

It is manifestly impossible for the State Secretary to put the names of those for whom state dues have not been paid on the mem-

bership roll. So, it seems, there are some who are "in good standing" in their local societies who are not even members of the State Association. This is due to the simple fact that men carelessly neglect to pay their dues when due, and to the further fact that some County Societies adopt rules which do not accord with the constitutions of local and state organizations. Membership dues are payable on January 1st of each year. Because of the tendency upon the part of so many to delay payment, action was taken by the House of Delegates which extended the time for receiving state dues to April 1st of each year. Any who do not pay by this time are automatically suspended. They may be reinstated upon payment of dues at some time during the year, but when reinstated into the County Society, they are supposed to become members, too, of the State Association and their dues should be paid for the year to the State Association.

MEDICAL DEFENSE.

In view of the fact that medical defense for members of the Medical Association of Georgia will be proposed at the next meeting, the following information, collected from various sources, may prove of interest to the readers of the Journal:

More than twenty state societies have a medical defense act for the protection of members. Several have adopted the plan within the last year, just how many we do not know. In New York, medical defense has been in effect for twelve years and has operated successfully. In only one state has any decided effort been made to repeal this act, this attempt having failed.

In no state does the State Association pay verdicts that may have been secured against members who have been sued. Only counsel fees and court costs are paid. In some of the states members are advised to carry liability insurance, though this is not generally encouraged. In some states the society divides expense with the insurance company when the defendant has private insurance, while in some others the society does nothing more than to furnish advice, the whole cost falling upon the insurance company. All prefer that the conduct of the defense should be wholly in the hands of society counsel.

The number of suits brought annually differs widely in the various states—from none

in some to thirty or more in others. In nearly all, suits are threatened which never materialize, being disposed of in some way before coming to trial.

The yearly expense varies greatly in the different states—from nothing at all in some to above six thousand dollars in one.

In some states every suit is defended regardless of the merits of the case, while in others the committee of the society determines which suits are meritorious and which are not.

It is thought by those having in charge the administration of the medical defense acts in the various states that medical defense for members does much to discourage the institution of damage suits, since the society does not obligate itself to pay damages.

TRYING TO BUY THE DOCTOR.

One of our fellows has sent us a check made to his order by a commercial house which advertises widely in medical journals. The check is a "commission" on an order forwarded by the doctor for his patient, and is for twenty per cent of the amount remitted to the house at the time the order was given. A nice little pink slip is attached to the check sent the doctor on which the statement is made that "a discount of twenty per cent will be allowed physicians on mail orders direct." To our mind, this is nothing more nor less than an attempt at brazen-faced gouging on the part of this commercial house, in addition to being an insulting invitation to the physician to become a partner in the process.

Needless to say, the doctor concerned in this instance will endorse the check and send it to his patient so that she may have the benefit of the "commission." Hereafter his orders for goods of the kind sold by this house which is so generous to physicians will go to another firm. No decent doctor is going to allow himself to be bought to gouge his patients.—*Jour. Tenn. Med. Assn.*

TRYING TO KEEP 'EM IN LINE.

There are, it seems, some men who use the County Society and the State Association simply as stepping stones to membership in the A. M. A. and other organizations. At any rate, one of our County Societies feels that way about it, and will vote at the next meeting on a proposition to change the by-

laws so that members will be compelled to remember that they have certain duties to perform in the County Society.

The proposed amendments will make the dues "three dollars per annum, payable at or before the November meeting of each year. Any member failing to pay dues before January 1st shall stand suspended, but may be restored upon payment of all back dues.

"Any member who fails to attend for six consecutive meetings without excuse satisfactory to the Society shall be suspended or expelled by a two-thirds vote of members present."

We hope the proposed amendments will be adopted. No man who grossly neglects his duty is entitled to any privileges that may be created by simply having his name on the membership roll.—*Journ. Tenn. Med. Assn.*

GAS-PIPE THERAPY GETS A SETBACK.

Since the days of Perkin's Metallic Tractors, no medical fraud of the drugless type has enjoyed greater vogue or swindled more people than those devices we have facetiously referred to under the term "Gas-Pipe Therapy." There are many of the gas-pipe frauds on the market. The original was the "Electropoise," devised by one Hercules Sanche, who later elaborated his device and sold it under the name "Oxydonor," having in the meantime persuaded a not-too-exacting patent office to grant him patent rights on the egregious humbug. So profitable, apparently, did the sale of this piece of fakishness prove that many imitations appeared. First, the "Oxygenor"; then, the "Oxygenator," the latter having its name changed later to the "Oxypathor." The "Oxytonor" and the "Oxybon" were still later modifications of the same scheme. Of these the Oxypathor (Oxygenator) has been the most extensively and elaborately exploited, and the extent to which the public has been defrauded has brought forth protests from various sources. The device itself consists essentially of a piece of nickel-plated tubing filled with inert material, sealed and having attached to each end a flexible cord with a garter-like attachment at the free end. One garter is to be attached to the wrist and the other to the ankle of the person using the Oxypathor (Oxygenator). The gas-pipe itself is put in a bowl of cold water. According to the claims of the exploiters, the pa-

tient to whom the Oxypathor (Oxygenator) is attached, is made to absorb large quantities of oxygen through the skin. So absurdly fraudulent is the Oxypathor that the public in various parts of the world has been warned against it. The Australian government has debarred the thing from the Australian continent, while the committee appointed by the British Parliament to investigate medical frauds reported:

"Much fraud is also successfully practiced by the advertisement and sale of appliances, as alleged cures for many ailments . . . appliances alleged to supply oxygen (otherwise than by inspiration) such as the 'Oxydonor' and 'Oxygenator' are, of course, deliberate swindles, for the makers cannot be supposed to be as ignorant of chemistry and therapy as their victims."

Now comes word from Vermont that the United States government has successfully prosecuted E. L. Moses of Buffalo, N. Y., general manager of the Oxypathor concern. The trial, which was held in Rutland, Vermont, lasted over a week, and on November 7, 1914, Moses was found guilty of using the mails to defraud. The scheme has been a profitable one. At the trial it was brought out that the Oxypathor costs \$1.23; it was sold for \$35. Aside from the element of suggestion inseparable from the use of a mysterious, expensive-appearing and imposing-looking device, purchasers of the Oxypathor could have obtained just as valuable curative effects from an empty tomato tin with a string tied to it. As a therapeutic agent, according to *The Journal of the American Medical Association*, the Oxypathor belongs in the same class as the left hind foot of a rabbit caught in a graveyard in the dark of the moon. Yet at the trial the exploiters of the Oxypathor were able to produce witnesses to testify to the curative value of their gas-pipe—and a few of the witnesses called themselves doctors! This exhibition of credulity—or, in the case of physicians, worse—is but another proof of the inherent worthlessness of testimonials. Imposing and convincing testimony would have been forthcoming long ago to prove the therapeutic efficiency of the rabbit's foot if some one had an exclusive proprietary interest in the sale of rabbits' feet.

Dr. J. Cheston King, of Atlanta, announces the removal of his office to the Empire building.

BAD TEETH A CAUSE OF CANCER.

Constant irritation of any part of the body is now well recognized as an important contributory cause of cancer. One of the forms of irritation which has been repeatedly observed to result in this disease is the constant friction of the sharp edges of bad teeth or of imperfect plates against the sides of the tongue. To be sure, sores on the tongue caused in this way do not always become cancer. Neither are wounds from toy pistols always followed by lock-jaw. But there is danger in both cases, and it is as easy to avoid it in the one as in the other. A bad tooth should never be tolerated in any event, and the danger of cancer is only one more good reason for having it attended to. Cancer of the tongue may occur at any age, but it is most common between 40 and 60. Statistics show very few cases under thirty. The majority of these cases occurred in females, while in later years males were found to be more frequently attacked. Cancer of the tongue in young subjects is especially fatal. Out of thirty cases there were only two recoveries. The others died within ten months or could not be traced. As one-third of all the cases investigated have been shown to be definitely associated with jagged or decayed teeth or imperfect plates, it would seem that here, at least, is one method of preventing cancer. It is probable that other conditions occurring in combination with the bad teeth increase the likelihood of cancer of the tongue as a result, but the removal of this form of irritation is so simple a matter that deaths in cases of this kind must be mostly charged to pure neglect. Where a sore place caused by a jagged tooth does not promptly heal there is real danger of cancer. If the removal or treatment of the tooth does not relieve the situation and the ulcer continues, prompt operation is necessary, for this form of cancer is quickly fatal.

WHAT BAD EYES MAY MEAN TO A NATION.

Many people think but little of the consequences of bad eyes, unless blindness, or very sore eyes are threatened or present. Such conditions are terrible, but they do not threaten the people or state as much as other eye diseases that are not apparently pitiable.

People who are blind or whose eyes are hopelessly diseased are usually taken care

of in institutions and do not become a menace to the public. But schoolchildren whose eyes look all right, but who have certain diseases or defects that render study and education a hardship, may become a danger to other people. A schoolchild, born with an undetected cataract, or very near-sighted, so that he cannot see the blackboard, soon falls behind his class and becomes discouraged with his school-life. A child with far-sight, or astigmatism, or some muscular defect of the eyes, by which, when he studies, his eyes pain and he suffers from headache, will contract a dislike for books, study and education, and will perhaps be punished or kept after school for something for which he is really not to blame. Such children, their educational progress embarrassed or almost stopped by reason of uncorrected physical defect, soon acquire a loathing for education and all that education represents, and, the seeds of idleness and irresponsibility being sown, may develop into criminals and dependents. No flight of fancy is required to transform such children into the non-supporting "ne'er do well," the wandering and menacing tramp, or the idle pleasure-seeking and misery-finding prostitute. Bad eyes that hinder education mean a distaste for school. Idleness, truancy, bad associates and habits, drinking, gambling, stealing, murder, prison and the gallows may follow. This is no fancy picture. It can be proved by observation and statistics. Visit the criminal courts, the reformatories, the jails and prisons, and how often do you find lawbreakers from the ranks of the educated? Some, it is true, are natural criminals, the offspring of criminal parents, but even here there must have been a beginning, proceeding some generations back, perhaps from some ancestor who was deprived of proper training, education, possibly by bad eyes. The great mass of criminals, however, are not born offenders, but become so through associations and lack of a cultivating and ennobling education, which is, of course, practically impossible if bad eyes or other defects prevent a suitable education. Education is one of the greatest barriers to crime and poverty. It is therefore essential that our children, the coming generation, should be well educated, and that bad eyes, or any other physical or mental defects, should be detected and corrected, in order that the acquirement of an education may become as easy and agreeable as possible.

TYPHOID CARRIERS.

Now that the quality of public water supplies has been greatly improved and the practice of milk pasteurization has been widely introduced, outbreaks of typhoid attributed to typhoid carriers are becoming more conspicuous than formerly, although probably they are not really more frequent. A remarkable epidemic due to food infected by a carrier was recently reported by Sawyer in a recent issue of *The Journal of the American Medical Association*, and while this was perhaps exceptional in the number of persons infected at one time, it emphasizes the grave danger of allowing carriers to have to do with the preparation or handling of food intended for general consumption. The still more recent typhoid outbreak at Lehigh University with more than fifty cases and several deaths has been traced likewise by the Pennsylvania State Department of Health to a kitchen employee who proved to be a healthy carrier. Such instances—and they are multiplying fast—suggest that wherever feasible, employees handling foods liable to spread infection should be examined for a possible typhoid reaction in the blood. In case the reaction is positive, and even when it is negative, but there is a definite history of typhoid fever, bacterial examination for typhoid germs should be made. Application of the test could probably be made with little inconvenience in connection with the student dining halls of many educational institutions where proper bacteriologic facilities and expert service exist. We know of at least one American university where such a routine examination of the employees concerned in the handling of food has been practiced for years past. The disaster at Lehigh shows that such precautions are justified, and that with our present knowledge of typhoid causation some responsibility in this regard may be justly expected from college authorities. There are also many hospitals, sanatoriums and public institutions in which the necessary facilities and skill for such examinations exist or could be readily provided, and here, too, it is true that to be forewarned is to be forearmed. In the future uncomfortable questions may be asked when carrier outbreaks occur in large institutions that are provided with bacteriologic facilities.

Dr. M. M. McCord, formerly of Whigham, has moved to Rome.

UNITED STATES PUBLIC HEALTH SERVICE.

Rupert Blue, Surgeon General.

Dear Sir:

I am inclosing herewith a set of questions on demography to illustrate the kind of questions on the subject we purpose asking medical graduates who come up for examination for entrance to the corps.

Officers who enter the Public Health Service necessarily must master the essentials of vital statistics. The nature of their work demands this. But we feel that the relationship of the practicing physician to the registration of births and deaths and to the reporting of the notifiable diseases is such that we may properly assume that a man who has been graduated in medicine and is ready to enter practice is familiar with the essentials of demography, at least to the extent comprehended by the inclosed questions.

Very truly yours,

RUPERT BLUE,
Surgeon General.

VITAL STATISTICS.

Questions in Vital Statistics Asked in Examinations for Entrance to the United States Public Health Service.

1. What are vital statistics?
2. What is meant by demography?

Population Statistics.

3. How is the population of a city or state ascertained?

4. For the purposes of vital statistics, how is the population of a city or state ascertained for years between censuses?

5. Discuss methods of estimating population for intercensal and postcensal periods.

6. Discuss the relationship between population statistics and birth, marriage, morbidity and mortality statistics.

7. A city had 100,000 inhabitants at the time of the taking of the Twelfth Census (June 1, 1900), and 123,700 at the time of the taking of the Thirteenth Census (April 15, 1910). Give the estimated population of that city as of July 1, 1915, on the basis of arithmetical increase.

8. In a city having a population of 57,600 April 15, 1900, and of 66,300 April 15, 1910, what will be the estimated population as of

July 1, 1914, the estimate to be made on the basis of arithmetical increase?

9. In a city of which the enumerated population April 15, 1910, was 66,300, and in which the average annual rate of increase during the previous intercensal period figured on a geometrical basis of increase had been 3 per cent, what will be the estimated population as of April 15, 1915, figured on the geometrical basis of increase?

Marriage Registration and Statistics.

10. What purposes are served by the registration of marriages?

11. Describe a common method in use in the United States by which the registration of marriages is accomplished.

12. What are marriage rates?

13. How are marriage rates expressed; that is, in what terms are they usually stated?

14. What factors influence marriage rates?

15. In a city having a population of 53,420 inhabitants at the taking of the Twelfth Census (June 1, 1900), and of 72,643 at the taking of the Thirteenth Census (April 15, 1910), there were during the calendar year 1913, 576 marriages recorded. What was the marriage rate for the year?

Birth Records and Statistics.

16. What purposes are served by the registration of births?

17. What is a birth certificate, by whom should it be made out, and with whom registered?

18. Describe a method in common use in the United States for the registration of births and the compilation of birth statistics for a state?

19. What are the essential data usually required in birth certificates?

20. What are birth rates?

21. How are birth rates expressed; that is, in what terms are they usually stated?

22. What factors influence birth rates?

23. What uses are made of birth records in public health administration?

24. Upon what does the accuracy of birth records and statistics depend?

25. The city of E had 125,632 inhabitants on January 1, 1913, and 130,368 inhabitants on December 31, 1913. During the month of June, 1913, there were 247 births and during the month of July, 1913, there were 223 births recorded. Give the birth rate for the

city during the period June 1 to July 31, both days inclusive; also give the birth rates for June and July separately.

26. In a city which had a population of 44,360 April 15, 1900, and of 53,230 as enumerated April 15, 1910, and which, during the calendar year 1913, had 1,376 registered births, what was the crude or general birth rate for the calendar year 1913? In estimating population use the arithmetical method.

Morbidity Reports and Statistics.

27. What are morbidity reports?
28. How are morbidity reports obtained?
29. What are morbidity statistics?
30. How are morbidity statistics obtained?

31. Describe a method in common use in the United States for securing morbidity reports.

32. What purposes are served by morbidity reports? Of what use are they to a local health department? Of what use to a state health department? Of what use to the federal health service?

33. Why is the reporting of cases of communicable diseases to the health department by practicing physicians necessary for the control of these diseases?

34. What factors influence the completeness with which morbidity reports are obtained in a community?

35. Upon what does the accuracy of morbidity reports depend?

36. What are morbidity rates?
37. What are crude morbidity rates?
38. What are specific morbidity rates?
39. How are morbidity rates expressed, that is, in what terms are they usually stated?

40. What are fatality, or case mortality rates, and how expressed, that is, in what terms are they usually stated?

The city of F had an estimated population of 324,000 on July 1, 1912. During the year 953 cases of typhoid fever were reported in the city and there were 51 death certificates registered in which typhoid fever was given as the cause of death. Give the typhoid morbidity rate, case mortality rate, and death rate.

42. The population of the city of G was 11,400 at the time of the taking of the Twelfth Census, June 1, 1900. On April 15, 1910, the population was 14,560. During the year 1912, 75 cases of diphtheria occurred in the city. Of the 75 cases 6 terminated fatally.

In making a report of the epidemic what would you report the morbidity rate of diphtheria to have been, what the diphtheria fatality (case mortality) rate to have been, and what the mortality rate?

Death Registration and Statistics.

43. What purposes are served by the registration of deaths?

44. What is a death certificate, by whom is it made out, and with whom registered?

45. Describe a method in common use in the United States for the registration of deaths.

46. What are the principal data called for by the United States standard death certificate?

47. What is the registration area for deaths of the United States Census Bureau?

48. What are mortality statistics?

49. What are death rates?

50. How are death rates expressed, that is, in what terms are they usually stated?

51. What are crude death rates, specific death rates, standardized (sometimes called corrected) death rates?

52. What factors influence crude death rates?

53. What effect have variations in age distribution of population on crude death rates?

54. Upon what does the accuracy of death registration and mortality statistics depend?

55. What uses are made of the records of deaths and of mortality statistics in public health administration?

56. How is the data obtained from which the United States Census Bureau compiles the mortality statistics of the registration area for deaths?

57. To what extent do mortality statistics show the actual causes of death and upon what does their accuracy in this depend?

58. On July 1, 1914, the city of D had 51,200 population. During the calendar year 1914 there were 896 death certificates registered. How would the crude death rate for the year 1914 ordinarily be expressed?

59. In a city having a population of 44,360 on April 15, 1900, and of 53,230, as enumerated April 15, 1910, and which during the calendar year 1913 had 932 registered deaths, give the crude, general, or central death rate for the calendar year 1913.

60. In a city which had a population of 44,360 on April 15, 1900, and 53,230, as

enumerated April 15, 1910, and which during the first six months of the calendar year 1913 had 530 registered deaths, express the death rate for this period in terms of an annual rate per 1,000 population.

61. In a city which had a population of 44,360 on April 15, 1900, and 53,230, as enumerated April 15, 1910, there were during the month of April, 1913, 103 registered deaths. Give the April death rate expressed in terms of an annual rate per 1,000 population.

Infant Mortality and Life Tables.

62. What is meant by infant mortality?

63. What are infant mortality rates and how expressed?

64. What are life tables?

A COUNTY SOCIETY CREDIT BUREAU.

Mr. Editor:

As a matter of interest to physicians generally, I think our profession has borne the brunt of burdens in this old world for caring for the sick and attending missions of charity, thinking in a great many instances that we are doing our duty to fellow man, while the opposite proves to be the case.

As for sweet charity, we all owe our best and always will; but there is a class of impostors who need not come in that class and we can stop that practice very easily; and to these I refer what we all call dead-beats. That is, those who make good salaries and squander money in various ways, while the men who keep him in health to do these things they never give a thought when their bill is presented.

For this evil the Lowndes County Medical Society has adopted a credit bureau system which is destined to facilitate our efforts in knowing who is worthy of charity and who is classed a dead-beat. There is nothing binding about this system, as any doctor can go to see all of the dead-beats, so far as his obligations are concerned; but he has the opportunity before his eyes to see what it is before he goes.

It is more of a plan as carried out by the mercantile houses in our cities, these reports being revised and reissued every two or three months.

We don't try to get out reports on every account, but limit this at present to the bad accounts; and as they clear the sheet more are added.

It was through the Southern Stationery &

Printing Company of this city that we got out this sheet, and upon application to them they can furnish any county society with proofs such as we have, and the most significant thing about the simplicity of it is, the small cost. As we have about twenty members it will be about two dollars for the first year and fifty cents each year thereafter.

One doctor in our society has collected money since the announcement of this in our home paper, that he had called gone. And I am sure that our collections among this class will increase as we tell them where the names appear.

I am glad to mention this as a suggestion to the various county societies, as there are some who, no doubt, would like to see their collections benefited and will feel interested. Our aim is to protect the needy and protect ourselves without sacrificing charity.

The scheme is a report on special blanks from each member of bad accounts. From these is compiled another sheet which shows the name, classification of account, occupation, and address. This sheet is to be made out in duplicate for each member, who receives two copies. One he keeps on his office desk and the other at home. Hence when he gets a call to a stranger in his community all he has to do is to glance at this sheet and it tells him who he is. If his name does not appear on the sheet he is supposed to be O. K. If it does, you can be governed accordingly.

I believe this simple method will let most of us sleep better and at the same time let some others realize that we are the poorest paid set of professional men on this globe although we do charge two or three dollars per visit.

Hoping this suggestion will find favor somewhere, where this practice has been in vogue for fifty years, I am,

Yours truly,

JAS. A. THOMAS, Secy.

ATLANTA ROENTGEN RAY SOCIETY.

On October 29, fifteen men in Atlanta, interested in different practical applications of the Roentgen ray, formed the Atlanta Roentgen Ray Society.

Pending the adoption of a constitution and by-laws, Dr. George M. Niles was elected acting president, and Mr. B. E. Sale, acting secretary.

ATTEMPTS TO TRANSMIT PELLAGRA TO MONKEYS.

C. H. Lavinder, Edward Franeis, R. M. Grimm and W. F. Lorenz (Journal A. M. A., Sept. 26, 1914), give the results of their attempts to inoculate monkeys with pellagra. In their first experiment in the inoculation of pellagrous tissues, the brain, spinal cord and their membranes were ground, mixed with an equal volume of normal saline and allowed to extraet in the ice-box for periods varying between one and eighteen hours and then filtered, without pressure, through gauze. The filtrate was injected intracerebrally, intravenously, intraspinally and intraperitoneally into rhesus monkeys. The buccal, thoracic and abdominal contents, except the intestines; the intestines and fecal contents, and the skin, were similarly treated and injected. Blood of pellagrins, after being either defibrinated or eitrated, was injected intravenously and intraperitoneally into each of four rhesus monkeys. The pericardial fluid, the urine, the feces, the cerebrospinal fluid, were also used in the experiment. The animals were also fed pellagrous material mixed with spoiled corn meal. The animals used were rhesus monkeys, Java monkeys and baboons. In all, 103 experiments were made, in which material collected from pellagrins during life or at necropsy was introduced into the stomachs of animals; fifty-two experiments were made in which pellagrous fluids were injected and ninety-six in which extracts, suspensions or emulsions of pellagrous tissue were injected. The animals were exposed daily to the direct rays of the sun. Eight of the animals died. In four instances death was plainly due to some other cause than pellagra. In four the cause of death was undetermined. With one exception the surviving monkeys have so far shown no indications of pellagra. The authors conclude that no inference as to the communicability of the disease can be made.

GEORGIA SURGEONS' CLUB.

To the Executive Committee and Committee on Arrangements:

I beg to announce that the President, Dr. E. C. Davis, has appointed the following Committee on Arrangements for the clinical meeting of the Georgia Surgeons' Club, in Atlanta, Friday and Saturday, February 26 and 27, 1915: Drs. Willis Jones, E. G. Bal-

lenger, S. T. Barnett, Michael Hoke, F. P. Calhoun and W. S. Goldsmith.

The Secretary-Treasurer would make the following suggestions:

1. That a general invitation to this meeting be extended to the regular organized members of the profession of the South.
2. That the Committee on Arrangements select a place for a dinner on the evening of the 26th and a program for a symposium on some surgical subject with leaders of discussions.
3. That a clinical program of surgical specialties be made and announcements of such be made in the general announcement.
4. That the Committee on Arrangements secure and report all data necessary for the printed program to Secretary-Treasurer as early as possible.
5. That it be announced on the program that the question of enlarging the scope of the club will be discussed so as to become a Southern organization, urging the presence of honorary members for this purpose.

Yours truly,

R. M. HARBIN, Sec'y-Treas.

MEMBERSHIP IN THE COUNTY SOCIETY.

What your annual dues secure for you:

1. Membership in the County Medical Society.
2. Membership in the State Medical Association.
3. Membership in the American Medical Association.
4. Eligibility to Fellowship in the A.M.A.
5. Opportunity and benefits of the work of all of these.
6. The Association Medical Journal.
7. The promotion of social and fraternal interests.
8. The opportunity to work with your confreres for professional advancement.
9. Satisfaction or joy in having fraternal partnership in the greatest medical organization of the world.

Who would ask more for the amount of dues paid? Dr. Outsider, get in and get in quick.

At Atlanta Dr. Emory R. Park has been elected to the position of registrar of the new vital statistics department created by the legislature last summer. His offices are at the state capitol.

REGULAR MEETING OF THE SIXTH DISTRICT MEDICAL SOCIETY.

Macon, Ga., November 11, 1914.

Any physician who is a member in good standing in a county society of the Sixth Congressional District, may on payment of the annual dues (\$1.00) become a member of this Society.—By-Laws, Chap. 1, Sec. 1.

Program.

Place of Meeting—Over Clisby's, Second and Cherry streets.

Society called to order by the President at 11:00 a. m.

Report of Committees.

Papers.

1. Report of a Case of Taenia Nana, with Exhibit of Patient—Dr. J. B. Ward, Macon.

2. Eczema—Dr. J. M. Sigman, Macon.

3. Report of Fractures—Dr. C. C. Harold, Macon.

4. Keratitis Parenchymatosa—Dr. M. M. Stapler, Macon.

5. Address—Dr. W. B. Hardman, President State Medical Association, Commerce. Luncheon, 1:30 p. m., Hotel Dempsey.

Election of Officers, 3:00 p. m.

Clinic.

Officers.

President—Dr. J. M. Anderson, Barnesville.

Vice-President—Dr. O. H. Weaver, Macon.

Secretary-Treasurer—Dr. I. H. Adams, Macon.

Committees.

Program—Dr. T. E. Blackshear, Macon; Dr. T. H. Hall, Macon; Dr. I. H. Adams, Macon.

Public Health and Legislation—Dr. J. A. Combs, Locust Grove; Dr. C. L. Ridley, Hillsboro; Dr. R. F. Carey, Monticello.

Entertainment—Dr. R. H. Stovall, Macon; Dr. B. S. Gostin, Macon; Dr. J. R. B. Branch, Macon.

BOOK REVIEWS.

A Text-Book of Medical Diagnosis by James M. Anders, M.D. W. B. Saunders & Co., Philadelphia and London, 1914.

All practical advances in diagnosis, for the past two years, are included in the present volume. The following are the more important additions: Move-

ments of the two halves of the chest; electrocardiograms; extrasystole; auricular fibrillation; sinus irregularity; succussion sounds audible over the abdomen; abdominal tension, with original methods of determination; albuminous sputum; cobra-venom reaction in syphilis; the tick in transmitting relapsing fever; Rumpell-Leed phenomena in scarlet fever; inclusion bodies of Dohle in scarlet fever; sweating and its significance; Trichinella spiralis in the blood; MacEwen's sign and Brudzinski's sign of epidemic meningitis; Prendergast's reaction for typhoid fever; fatty emboli; pupillary reaction; drug eruptions; nitrogen content of the blood; respiratory movements in hiccough; colloidal nitrogen of the urine, and initial eruptions in measles. Stokes-Adams disease, blood pressure, ulceration of the duodenum, Addison's disease, and anterior poliomyelitis have been rewritten.

Clinical tables have been added on the following subjects: Bloody sputum, dyspnea, hemorrhage from the mouth, abdominal enlargement, vomiting, ascites, splenic enlargement, hematuria and bacteriuria.

The work maintains its reputation as an exponent of the best on diagnosis.

The Practitioner's Visiting List for 1915. Four styles: Weekly, monthly, perpetual, sixty-patient. Pocket size; substantially bound in leather with flap, pocket, etc.; \$1.25 net. Lea & Febiger, Publishers, Philadelphia and New York.

This is a practical convenience which, once possessed by the busy medical man, immediately becomes indispensable. It is a matter of common remark that most forms of pocket memoranda are admirably designed to further the immediate and permanent loss of the data it is desired to preserve. This, happily, is not the case with this carefully designed Visiting List and pocket consultant, which is the final evolution of thirty years' experience in meeting and anticipating the needs of the practicing physician.

It affords a simple and complete system for keeping the records of daily practice. In addition to the ruled pages for daily calls and their notes, general memoranda, addresses, cash account, etc., it contains specially arranged spaces for data desired for permanent record, such as births, deaths, etc. The value of such records is best appreciated by the physician who has been suddenly confronted by the necessity of producing such data after the lapse of years and in the absence of an orderly system for the preservation.

If the record blanks constitute a complete and thoroughly convenient record of practice, effectual insurance against financial loss or an overburdened memory, the supplementary text constitutes a handy reference work of equal value in practice or emergency. Among the useful features are tables of weights and measures and comparative scales; a scheme of identification; incompatibles; poisons and antidotes; directions for affecting artificial respiration; an extensive table of doses; an alphabetically arranged table of diseases and remedies; table of eruptive fevers; instructions for urinalysis and directions for ligation of arteries.

The Physician's Visiting List for 1915. P. Blakiston's Son & Co., Philadelphia.

For the sixty-fourth year this popular visiting list is presented to the medical profession. It is offered in three editions: the regular, the perpetual, and the monthly. The usual calendar and tables are included, as well as ruled pages for keeping various memoranda and accounts.

APPLICATION FOR MEMBERSHIP

TO THE OFFICERS AND MEMBERS OF THE

COUNTY MEDICAL SOCIETY

Gentlemen: I hereby make application for membership in your Society, and, if accepted as a member, I agree to support its Constitution and By-Laws, to practice in accordance with the established usages of the profession, and will in no way profess adherence or give my support to any exclusive dogma or school.

- I was born at on the day of 1
- My preliminary education was obtained at
(Public schools, high school or college)
..... located at from which I
(City and state)
graduated in the year 1 and received the degree of
- My medical education was obtained at
(Name of medical college)
..... located at
from which I graduated in the year 1
- My state certificate was issued
(Name of state and date of license under which you are practicing)
- I have practiced at my present location years, and at the following places for
the years named:
(Name each location and give dates)
.....
.....
.....
.....
- I hold the following positions:
(Give college and hospital positions, insurance companies for which you are examiner, etc.)
.....
.....
.....
- Specialty
- Residence Street
- Office Street
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Full Name

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OF THE

Medical Association of Georgia



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VOL. IV.

AUGUSTA, GA., JANUARY, 1915

No. 9

JUST READY

Allen's Local Anesthesia

This work is complete. You get the history and evolution of local anesthesia, the physiology, the toxicology and technic. There is a chapter on nerves and sensation, giving particular attention to **pain**, what it is and its psychic control. Then comes a chapter on osmosis and diffusion. Each local anesthetic is taken up in detail, giving very special attention to **cocain and novocain**, pointing out the action of the nervous system, the value of adrenalin, paralysis caused by cocain anesthesia, control of toxicity. You get Crile's method of administering adrenalin and salt solution; you get quinin and urea anesthesia, and the use of magnesium salts. The exact way to produce the intradermal wheal, to pinch the flesh for the insertion of the needle—all **shown** you step by step. Special chapters deal with the extremities and peripheral parts, abdominal and thoracic cavities, spinal and epidural analgesia, paravertebral and parasacral intra-arterial, intravenous, and general anesthesia with local anesthesia. Abdominal work covers 50 pages; genito-urinary work and hernia another 50 pages. You get an article on **anoci-association**, with Crile's technic for producing anesthesia. You get local anesthesia for rectal surgery, gynecologic operations and cesarean section, with Allen's own method of prostatectomy. There is an exhaustive chapter on the **head**, and a large section on **dental anesthesia**.

Octavo of 608 pages, illustrated. By CARROLL W. ALLEN, M.D., Instructor in Clinical Surgery at Tulane University of Louisiana. Introduction by RUDOLPH MATAS, M.D., Tulane University. Cloth, \$6.00 net; half morocco, \$7.50 net.

W. B. Saunders Company, West Washington Square, Phila.

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THE MORE RATIONAL METHODS OF TREATING AURAL DISEASES.*

Dunbar Roy, M.D., F.A.C.S., Atlanta.

This paper is brought for your consideration because otologists of today are too prone to diagnose aural diseases without sufficient thoroughness in their examination, and to use treatment which has been handed down to them by men of past generations. This statement is made in no wise as indicating that the writer is free from such criticisms himself, but is made because he recognizes the value of some of the newer methods which have given results much superior to those which have long been used. In considering this subject I realize that the large majority of my hearer are general practitioners who cannot keep informed of all the advances made in the specialties of medicine so that some practical remarks along this line, I am sure, would not be amiss.

Acute Conditions of the Middle Ear.

The fact that acute inflammations of the middle ear are not so frequent in the South

as they are in the North would lead one to the realization of the fact that the treatment of such conditions would be much more successful by the use of mild measures than by those of a more radical type as we hear advocated in the various text books on otology which have all been written by northern men. Just in the same manner, only Southern practitioners are capable to write intelligently on fevers and various other diseases which are indigenous to our Southern climate.

There are two distinct types of acute inflammation of the middle ear.

(a) Acute catarrhal, the ordinary earache of children in the winter, accompanied by and more or less dependent upon the presence of enlarged tonsils and adenoids with their attendant catarrhal rhinitis.

(b) Acute suppurative where the middle ear is overwhelmed by the presence of pus producing organisms and where nothing short of a punctured drum membrane will give relief.

(a) In this variety much can be accomplished by judicious treatment which in many cases will save the patient from suffering and prevent the condition from passing over to the suppurative variety. Frequent earaches

*Read at meeting of Medical Association of Georgia, Atlanta, Ga., 1914.

in children which occur at night and which disappear with the coming of the morrow only to return again the next night following an exposure to the cold and outdoor play in the face of the first night's experience, are largely due to the tonsil and adenoid condition. In such cases their management is perfectly obvious, which must consist in a thorough removal of the adenoids and tonsils. If on the second night the earache is more intense and especially if there is a rise in temperature accompanied by some bulging of the membrana tympani, there is but one way to proceed and that is the free puncture of the membrane and the placing in the canal of sterile wads of cotton to be changed as such become saturated with the serous fluid. I do not advocate the syringing of the ear unless the discharge becomes too thickly mucous and the pain after the puncture still continues. Under such circumstances hot saline irrigations are most beneficial, otherwise only the cotton tampons are used in the canal and changed as necessity demands. The old idea that the puncture of the membrana tympani destroys the hearing in that ear is fortunately disappearing and if physicians would realize that an early puncture, when necessary, frequently saves the hearing, then many an ear would be free from further pathologic condition. The management of acute inflammation of the middle ear in the adult differs from that employed in children. The inflammation in both cases usually starts from the same point, i. e., an extension from the naso-pharynx through the eustachian tube into the middle ear. In children, however, there is usually the attendant blocking of the nasal cavities with a large amount of mucous which in the presence of at least some adenoid tissue in the naso-pharynx, materially interferes with a proper drainage of the eustachian tube. In adults the nasal chambers are largely developed, as also the naso-pharynx and the patient has the additional advantage of being able to expel the mucus, both by blowing the nose and by expectoration. For this reason an acute inflammation of the middle ear in children is much more likely to be accompanied by an exudate which will require evacuation through the drum membrane, either surgically or by nature than the same occurring in the adult.

During the last six years, the writer has been able in at least 90 per cent of the cases of acute inflammation of the tube and middle

ear which have come to him for treatment to abort the inflammation, thus preventing additional weeks of treatment on account of a mucous or muco-purulent discharge through the drum membrane.

About three years ago Dr. Yankauer of New York began to advocate the treatment of inflammatory conditions of the tube and middle ear by the topical application of astringents to the inside of the tube with small cotton applicators passed into the mouth of the tube. For several years before this winter the writer had used this same method but had failed to publish the same. At that time I used No. 4 piano wire, simply preparing the end so to wrap thereon a small pledget of cotton which could be saturated with the medicine desired and passed through the catheter into the eustachian tube. Dr. Yankauer has devised some special corrugated wire which is quite an advancement over my own crude method and which materially aids the technique of this treatment. This method of treatment is applicable during the first twenty-four hours of the acute inflammation and is not near so efficacious after that period, and yet I have used it even then with some success. If an adult patient comes to me complaining of having suffered with pain the night previous in his ear, and if on examination I find the drum membrane red, especially along the manubrium, showing an acute inflammation of the middle ear and tube, I immediately make a thorough application of nitrate of silver (20 grains to 3) to the inside of the eustachian tube by means of the cotton applicator. This, of course, is not done until the nasal cavities and naso-pharynx are thoroughly cleansed of all mucus and the floor of the nose has been shrunk with a mild cocaine solution.

Before the introduction of the naso-pharyngoscope, this procedure was accomplished entirely by touch, but now since the introduction of that instrument we can look directly into the mouth of the tube and make any manipulations we desire. In acute conditions of the eustachian tube such applications are invaluable and far supersede the old method of blindly mopping the naso-pharynx. With the introduction of the Holmes naso-pharyngoscope we are now able to examine every part of the post-nasal space and even obtain a comparatively clear view into the mouth of the eustachian tube and there recognize pathologic conditions which previously remained unseen. The naso-pharyngoscope

ryngoscope is constructed along the lines of the urethroscope and those of you who are familiar with this latter instrument will readily understand the mechanism of the former. The pharyngoscope is passed through one nostril into the naso-pharynx and the eustachian catheter through the other side so that while looking through the scope one may readily manipulate the instrument on the other side, thus keeping the parts under direct observation.

Another instrument which I have used with great success during the last four years is the aural suction glass for forcing the secretion from the middle ear into the auditory canal through an opening in the drum membrane. I am sure that several of my cases of acute middle ear inflammation have been saved from a serious mastoid involvement by the use of this instrument. We all know that the great trouble in a mucopurulent inflammation of the middle ear is to keep the opening in the drum patulous after it has been incised so as to allow and aid a free flow of the secretion into the auditory canal and prevent it from damming back into the mastoid cells. With this instrument such strong suction can be made that the secretion can readily be emptied out of the middle ear into the canal through the drum opening and this repeated often enough to insure good drainage throughout the course of the disease. Siegel's speculum can be used in the same way, but the instrument here shown I consider more acceptable.

Chronic Condition of the Middle Ear.

In the treatment of a chronic discharge from the middle ear, whether mucoid or purulent, I can offer very little in the way of advanced treatment which is superior to that advocated by me in a paper read before this association several years ago. The fact is certainly most evident that discharging ears are not near so frequent now as they were ten years ago, and this I attributed to physicians realizing the importance of the presence of adenoids and diseased tonsils in the production of this condition and the almost universal method of treatment by the surgical removal of the same. This one fact alone would show the importance of removing adenoid vegetations and diseased tonsils.

In progressive deafness due to the so-called dry catarrh of the middle ear, we must even yet admit that it remains one of the dark pages in otological literature.

On the other hand, I am convinced that much can be done by rational treatment after a most thorough examination has been made.

It is unfortunate that the term "dry catarrhal deafness" was ever used as descriptive of this condition, for in the ordinary sense in which the term catarrh is understood this class of patients are usually free from such a pathological process. It is also unfortunate that so many physicians consider a stenosis of the eustachian tube as the chief factor in producing deafness in this class of cases, for otologists well know that a patulous tube is almost as frequently found as one of stenosis.

However, that such a stenosis is frequently a marked symptom in these cases we must admit and we must also recognize the fact that simple inflation will not always produce a patulous condition. If such fails then we have recourse to the eustachian bougies. Several years ago I used the metallic bougies with electrolysis and published at that time my results with this line of treatment. I have now abandoned this method and use only the ordinary whalebone bougies. When used in the right cases and with a delicacy of touch which is absolutely necessary, this is a valuable adjuvant to our other lines of treatment. Such, however, should only be used under direct ocular inspection through the naso-pharyngoscope. This latter instrument now enables us to do by sight which before had to be done by the sense of touch. Unless one possesses the *tactus ereditus*, the use of these bougies may be attended with considerable injury to the tube's mucous membrane, and if inflation is inadvertently made directly afterwards, an emphysema of considerable proportions is liable to occur. The old idea also that all cases of catarrhal deafness had their origin from the naso-pharynx is fallacious, for it is well known that in the majority of cases the naso-pharynx itself shows but few pathological changes. This, of course, does not apply to those cases in the young where there is present a bunch of adenoid tissue in this region and where its removal will usually be followed by a betterment and in most cases a restoration of the hearing.

I am afraid that too many of us are not sufficiently thorough in our examination of this class of patients and frequently give a mistaken prognosis. The differentiation of cases of oto-sclerosis from the ordinary cases of progressive catarrhal deafness is today

most important, not from a therapeutic standpoint so much as from our ability to give the patient an intelligent prognosis. The fact that middle ear inflation is so often used without a proper determination of why it is used has lead to the general belief that this method of treatment is without value. It is impossible for me within the limited scope of this paper to discuss the differential diagnosis between a diseased condition of the sound perception and that of the conduction apparatus, realizing, however, that all aural treatment must be adopted according to this determination.

In cases of oto-sclerosis or spongification of the labyrinth capsule and bone it is useless to force a patient to a long treatment directed to the nose and throat with the inflation of the middle ear. We know now that such treatment is practically useless, but on the other hand we must treat these cases by internal medication which will aid nature in stopping this pathologic process or at least fortify the constitution against its too rapid progress. This is, of course, difficult to accomplish and yet some good can be done along rational and intelligent lines.

In that class of progressive deafness where the bone conduction is good but the air conduction bad, where inflation of the middle ear increases somewhat the area of hearing, where the patient is strong and vigorous and has not passed the age of 30, where there is no history of hereditary deafness, then in such cases I believe that some good can be accomplished. However, it cannot be accomplished simply by sprays and the inflation of the ears by the Politzer or Valsalva methods. The naso-pharynx and the mouth of the eustachian tube must be inspected with the pharyngoscope and these parts treated as the necessity demands. The old methods of swabbing the naso-pharynx with astringents, especially the nitrate of silver, is unscientific. This was done in hopes that some of the astringent effect would reach the mucous membrane of the eustachian tube. Now, however, we get this effect by placing the medicine directly on the diseased parts, either by means of the delicate wire swabs or dropping the liquid in the catheter and with compressed air forcing the same even into the middle ear. Many of you have no doubt seen these cases which I call subacute otitis media. Such conditions follow a bad cold in the head and the

eustachian tube remains stopped and there are symptoms of blubberings in the ear. This is due to mucous in the eustachian tube. Before topical applications can be made it is my rule to apply suction through the catheter and draw this tenacious mucous out. It is surprising how much of this secretion can be drawn out. Afterward topical applications and inflations will much more readily bring about a resolution.

I am firmly convinced that in the use of the eustachian catheter we have the only rational method of inflating and treating the middle ear. Why should we inflate both ears if only one is affected, and this we must do if we use the Politzer bag. Then, again, with the catheter we can use compressed air with a definite pressure, which is the only scientific method to use. Also the catheter is introduced under direct observation by means of the pharyngoscope so that one can use medicated liquids, cotton applications or bougies, and at the same time know that they are reaching the right spot. The mucous membrane of the eustachian tube and middle ear must be treated and in no other way can you put medicaments on these parts except by the use of the catheter. Just what is the pathology of this form of progressive deafness is still in obscurity, but I am firmly convinced that we shall have to forsake the old idea that it has its origin in the nose and throat, and look for some inherent changes in the structures of the ear proper. Much can be accomplished by the internist when there exists the so-called intestinal toxemia and its allied conditions, and he is the best otologist who remembers that the ear is not a distinct entity from the rest of the human anatomy. If patients could receive thorough and proper treatment at intervals of at least twice during the year for a long period, I am sure there would be many cases of progressive deafness which could not only receive some benefit from the treatment, but who would stand a good chance of having an arrest made in the progress of the disease.

DISCUSSION OF DR. ROY'S PAPER.

Dr. H. M. Lokey, Atlanta: In place of the suction apparatus he has, I have been using the Siegel otoscope with satisfactory results.

In regard to these cases of acute earache in children, what I am referring to is not what Dr. Roy referred to, the cause, etc., but the treatment. All of you at one time or an-

other during the night will have a call from some anxious parent as to what to do for an earache the child is having. You do not want to make the call, but to relieve the earache, and you know you can't do much if you get there. It may be several miles to go. The old application of a solution of cocain, as you all know, has very little effect in relieving an acute earache in children, adults or anyone else. If it did have an effect it would be dangerous to use it in very small children because of the toxic effects of cocain. The cocain is not absorbable by epithelial tissue and the external auditory canal and the outer serous covering of the drum is covered by epithelial cells, and therefore you can get no results from the cocain itself.

Three or four years ago Dr. J. Z. Thompson of Atlanta suggested the use of a saturated solution of sulphate of magnesia in glycerin.

The therapeutic effect is that in the glycerin we may have the hydropic effect. With the alkaline mixture of epsom salts you get osmosis of most of the alkaline fluid in the middle ear. If there is any fluid in the middle ear or simply congestion, I use it in simple meningitis where there is congestion of the drum membrane but not of the middle ear itself. In these cases of acute earache where the drum has not bulged sufficiently to require myringotomy, I prescribe a saturated solution of sulphate of magnesia in glycerin—hot glycerin—and have it dissolve all sulphate of magnesium it will take up. I fill the auditory canal full, or place a hot bag of salt over the ear, and in 75 per cent of the cases you get almost instant relief from pain, and in over 50 per cent you will get absorption of the small amount of edema which will save future paracentesis or myringotomy.

Dr. J. Lawton Hiers, Savannah: I have listened to Dr. Roy's paper with a great deal of interest. I feel that even we men who try to limit our work to the eye, ear and throat know so little about the ear that personally I feel very thankful to Dr. Roy for what he has said. He has certainly left nothing that I can see to be discussed except to commend what he has said. If you can see these cases of acute middle ear trouble in the incipient stages, I have found that a mixture containing a small quantity of belladonna, given at frequent intervals, and in small quantities, will help to check the acute catarrhal inflammation, and instead of using heat in these cases where we have pain, I

am partial to the ice bags, and it is surprising the quick results you will get from ice bags even in the suppurating conditions, because we must of necessity have a hyperemic condition in the entire inflammatory area, and the judicious application of ice will lessen that and afford the patient a surprising amount of relief.

Dr. J. M. Baird, Columbus: I want to emphasize one point the doctor made, and that is thorough drainage after paracentesis. There is no doubt in the world but what that is the thing to do, and I have been in the habit of using gauze instead of cotton. It may not be better than cotton he has suggested, but it always seemed to me that drainage was more thorough when I used a narrow strip of gauze than cotton.

There is one point I want to emphasize, and that is, we should be exceedingly cautious to see that the cotton or gauze introduced into the canal is well up against the drum. If there is a little mucus mixed with the pus, or muco-pus, it will dam up and not drain out and act as a wick. If the gauze is up against the drum after paracentesis it acts simply as a wick and you promote drainage.

Dr. Roy, in Closing: I do not like to disagree with the last speaker, but I think you will find it makes no difference whether you use gauze or cotton. If I have sterile gauze, I use it! if I have sterile cotton, I use it. It does not matter, especially if they do good work. The main thing is, if you put that away up against the drum membrane the patient is going to come back; you have to pull it back a little; the patient will have irritation, you will pull it out a little and the patient will be afforded benefit. If you have ever plugged the inside of the ear with cotton or gauze, and let it go against the drum membrane, the patient will wince; he cannot stand the pressure in there. If you move it from the drum the patient is comfortable.

I did not go into every phase of acute and chronic ear conditions, but my main purpose was to draw attention to the fact that we are just at the threshold and are beginning to know how to treat ear cases. There is no one particular treatment that will give relief, but every case that comes under your care has to be studied thoroughly, and I believe that many cases can be benefited, but they are not benefited because we are too hurried in our examination. We do not give the

time, and therefore we do not give a correct prognosis to the patient. My plea mainly is on those points which I brought out especially in the line of treatment I have used, as I consider they are most scientific rather than to treat patients in a haphazard manner. The old idea of introducing a swab and swabbing out the nasopharynx and believing that will help to decrease the deafness is entirely fallacious, but if you find the mucous membrane of the eustachian tube does need some application, then it can be done under the use of the pharyngoscope directly under your own observation, and with these little wires which I have shown, you can put a small piece of cotton and any medicine on it you want.

The same in reference to these bougies; if you have a stricture of the eustachian tube, you can get inflation with the catheter. I do not use the Politzer bag; I abandoned it long ago, and I think it is absolutely obsolete. The only way in the world to treat a chronic ear condition is by the use of the catheter because you are not treating, as a rule, both ears, but one ear, and why we should use the Politzer method and inflate two ears and push out the drum, which is probably more or less in a normal condition and cause expansion of the fibers there and probably later trouble which did not exist, I cannot see. I believe there has been many an ear made worse by too much treatment and by improper treatment. I think if these ears are not treated scientifically, it is better not to treat them at all, and unless you differentiate between the condition of the middle ear and the condition of the internal, whether it has a thickening or not, and oval windows and thickening around the nerve, showing it has defects, and treat that case when the drum is retracted, you are going to produce a good deal worse condition than existed before, and the patient receives no benefit.

The plea of this paper was to call the attention of the profession to the fact that we can now, with instruments of precision, and with the instruments for making the differential diagnosis as to the point of involvement, get at these cases in a most scientific manner, and the results in time will be so much better for ourselves and for the patients.

An advertisement in The Journal of the Medical Association of Georgia will bring results. Rates sent on request.

THE SLUDER TONSIL OPERATION.*

H. H. Martin, M.D., F.A.C.S., Savannah, Ga.

The Sluder operation for complete enucleation of the tonsil is a surgical procedure which has not yet come into its own.

This is true for several reasons, but mainly because very few surgeons can learn to do this operation satisfactorily through simply reading the published descriptions. I myself attempted it some twenty or thirty times with uniformly brilliant failures, until after I had spent some days with Sluder and his most capable associate Gundelach, and had learned the essential technic of this operation.

I will not take up your time with a detailed description of the operation in this paper because a full description would be simply a repetition of Sluder's papers on this subject, reprints of which are easily available, but will simply call your attention to its essential features and give you, so far as I am able, the benefit of my very limited experience with this procedure.

In the first place, the desiderata of a perfect tonsil operation enumerated in the order of greatest importance are as follows: A thorough removal of all tonsillar tissue, including the capsule and plica, a minimum of traumatism and loss of blood with consequent shock; a minimum of time consumed in performing the operation, and the simplest possible instrumentarium consistent with a thorough accomplishment of these purposes. As to the first, if you will carefully examine a tonsil successfully removed by Sluder's method you will observe that the tonsil appears to be turned inside out, that is, that the external or exposed surface has been turned inward and the capsule in its entirety has been invaginated over the body of the tonsil. I have here a clipping from a reprint of Sluder's paper of March, 1913, showing this appearance beautifully.

I agree with Sluder when he says that those who hold to the view that the tonsil is not a structure that can be removed in its entirety by a single instrument are not familiar with the technic of this operation.

In one of Sluder's papers on this subject he states very clearly and convincingly that his method will be found to be satisfactory under all usual conditions, provided the

*Read at meeting of Medical Association of Georgia, Atlanta, Ga., 1914.

variations in the jaws of different ages are borne in mind. And that the imbedded tonsil and flat tonsil stumps remaining from previous incomplete operations are as easily and quickly removed as a protruding one, providing the operator is thoroughly familiar with the method and has acquired sufficient dexterity in managing the instrument; admitting, however, that from 5 to 7 per cent of tonsils will require a second setting of the instrument, but that none will require the aid of a vulsellum or any other instrument excepting occasionally the tip of the index finger to aid final separation at the base. He further warns the inexperienced that peritonsillar infiltrates, until the surgeon has learned to recognize them, may interfere with the success of the operation, the operation being completed in these cases by a more careful manipulation of the instrument and a more deliberate judgment as to when all tissue to be removed has been tucked through the ring.

As to the second of the desiderata named above, the beginner in this operation will produce a great deal more traumatism than one more familiar with the technic and more dexterous in the manipulation of the instrument, but even then the amount of traumatism is not one-half so great as in other methods of enucleation with which I am familiar, while in the hands of operators like Sluder and Gundelach the traumatism (exception noted below) is limited to the actual capsular attachment; while hemorrhage, according to a report on 310 children from 2 to 15 years old in the St. Louis Children's Hospital averaged 70 cc. (4 1-3 tablespoons), including the bleeding from the pharyngeal as well as from the faucial tonsils. My own limited experience is entirely in accord with this report.

Under this heading Sluder says: "In comparing the wounds made by the dull blade of the guillotine and a snare wire (presumably No. 10) I have not been able to determine any difference from the standpoint of hemorrhage." As to post operative hemorrhage, nothing is said in his paper of March 1913 on this subject, but I recall that he told me during my visit to St. Louis of at least one; and as evidence that he has a wholesome respect for that very unpleasant experience, he never removes both tonsils at one sitting in his out patients nor in private practice, removing adenoids and one tonsil at one time, and the remaining tonsil at a

later date. However, in his ward service at the hospitals both tonsils and adenoids are removed at one sitting under nitrous oxide anaesthesia. In my own experience there has been no post operative hemorrhage from tonsil operations since the four reported in September, 1909, two of which occurred one week after operation and two which were continuous from the time of operation for several hours afterward. These were in the early days of tonsillectomy. I invariably remove both tonsils and adenoids at one sitting.

The exception referred to above under traumatism, is the only conclusion in Sluder's report on this operation with which I am not entirely in accord, and I wish to affirm that my experience is not to be compared with his, neither is my judgment or ability to draw conclusions, but I am not yet convinced that the following extract from Sluder's paper is a wise or commendable conclusion: "Further examination of the specimen reveals that a little of the free edge of the anterior pillar, including a few fibers of the palatoglossus muscle, is attached to it. I always remove this bit of the anterior pillar with the tonsil because it leaves a more open wound and a more open fossa when healed. There seems to be no surgical reason against it; on the contrary, it makes the tension of the scar begin at a point anterior to and below what would otherwise be the case, which tends to draw the palate forward and downward. In cases in which the tonsil is to be removed because of eustachian tube irritation, this seems to me to be advantageous."

As I said before, I do not fully agree with this conclusion. I am free to confess that in my earlier attempts to perform this operation I very often included a portion of the anterior pillar in the grasp of the blade, but I did not do so intentionally, nor would I do so intentionally now.

As to the third of the above mentioned desiderata, I quote Sluder literally: "Familiarity with the method will enable the surgeon to remove a tonsil in its capsule complete in from five to eight seconds." As to instrumentarium, a mouth gag, a tongue depressor and the guillotine are all the instruments required. How beautifully simple, what a comfort it is after wandering for ten years through an impenetrable forest of tonsil instruments—separators, dissectors, snares, enucleators and what not, to arrive

at so satisfactory a journey's end; the removal of a tonsil in its capsule complete in from five to eight seconds with the loss of a spoonful or two of blood and a traumatism so insignificant that children will take solid food two days after the operation and can return to their usual affairs and amusements after three days, and all with a single instrument. I repeat that this procedure has not yet come into its own, but in time it will and the profession will unite in doing honor to the man who gave it to us.

It is a time honored custom among surgeons when one of their number has devised a method of operating and has created an instrument to facilitate that method, to immediately offer some modification of either the instrument or of the method; sometimes both. Occasionally such modifications are practical and add greatly to the usefulness of the instrument and to the success of the method, but more often they are of no practical value and serve only to confuse students of the method in question and to complicate our armamentarium. The reason for this is that a large number of surgeons will plunge blindly into a new or original method of operating and will attempt to use a new and unfamiliar type of instrument without giving the method or the instrument a sufficient study to intelligently comprehend either. As an example we have the Ballenger modification of the Sluder guillotine, the Beck modification of the Sluder guillotine, and so on ad infinitum. In this connection Sluder says: "After a trial of all the modified instruments and their usages, including my own, I so much prefer the original model that I have been to some pains to preserve it and still meet the requirements of all operators. I have been able to add power to the original by means of what is described as a mechanic's "dog." It consists of a lever with a hook on the distal end which is engaged in a hole made in that part of the shaft which becomes exposed after the blade has been pushed across the aperture. The squeezing power of this leverage will be found to be very great. It may be applied as slowly or as rapidly as desired. The handle of the "dog" makes an excellent tongue-depressor.

I thoroughly agree with Sluder as to the original model of the instrument. I have used the "dog" a number of times, but do not use it now. It is entirely unnecessary, for if the separation is not completed with

the dull blade it can easily be completed by stripping the ring with the index finger. Sluder says: "Stripping the ring seems to me a very simple thing and easily done. I know, however, from personal observation that there are some experienced and skillful surgeons who cannot do this stripping—who seem to have no knack or aptitude for learning it. I have seen the tissues thus engaged in the guillotine amount to almost a major difficulty in their hands. For this reason, they demanded that their blades be sharp. In the substitution of the sharp for the dull blade the percentage of their satisfactory results decreased, and the consequent bleeding increased."

In conclusion, I can summarize my experience with this operation in a very few words. Since October, 1913, I have used no instrument in removing tonsils other than the Sluder guillotine, a mouth gag and tongue depressor, in one instance only I have had to set the instrument a second time, in no instance has there been anything resembling post operative complications. The average loss of blood has been about 30 cc. for each tonsil. Children recover and return to school in three days as a rule. Adults recover in from five to seven days. I have operated on four cases in thirty minutes, removing adenoids and both tonsils.

The operation requires no assistant other than the anesthetist. My cases have been of all varieties and all ages up to 45. Large protruding, small flat, large and small imbedded, and a large number with stumps left from previous operations.

The original model with a moderately dull blade is superior to any of the modifications. A sharp blade defeats the purpose of the instrument, which is to enucleate the tonsil, not to cut it. The "dog" is unnecessary.

DISCUSSION OF DR. MARTIN'S PAPER.

Dr. R. R. Daly, Atlanta: Strange as it may seem, I believe that Dr. Martin's is the better instrument. I believe it is better than the Sluder instrument, and that originally he had a better method. I know he has repudiated his own snare in his paper and talk today. The principle of the removal of the tonsil which Sluder initiates or enucleates, so far as traumatism is concerned, is the secret of the operation when successfully done. So far as the time element of taking

two or three minutes longer to take out the tonsil, it is of little or no importance in the matter of shock to the child. We can keep children under an anesthetic as long as we like for other conditions.

In the last 100 operations done in my clinic I have used the Martin snare, prepared the tonsil, loosening it from its attachments largely with my finger, assisted with a small knife known as the Douglas knife. The point of importance in connection with the tonsil operation is getting the tonsil thoroughly free from all adherence to the pillars or ligaments and the supratonsillar space at the top. If it does not tear loose, you can do it without producing hemorrhage. Since adopting that method bleeding has decreased very largely. If the tonsil is loosened round about with your fingers without any force, nicking it a little bit, and slipping a wire which is arranged to fit accurately over the tonsil, letting it drop back, you can take out the tonsil easily. You never cut the pillar. To cut the pillar, as a matter of fact, would be an admission of faulty technic. I do not see any good in cutting the pillars under any circumstances. They have a purpose. Each one of the muscles entering into the formation of the two pillars has a purpose or function. The tonsil can be taken away, leaving a surface which will heal quickly. With mucous membrane from the anterior pillar it can be peeled back by the finger and filled in. I have tried the Sluder operation and I do not get as satisfactory end results as I do with a properly adjusted wire snare.

Dr. William C. Lyle, Augusta: I have never had any experience with the Sluder instrument which has been shown by Dr. Martin. Before taking it up I waited for a modification, and after having seen Ballenger use it a few times, it impressed me as a good thing on account of the time saving element. Therefore I began the use of the Ballenger modification of the Sluder instrument. I found, however, in observing Dr. Ballenger himself, he could not remove all of the tonsillar tissue with his modification of the Sluder instrument. I found, when I tried to remove all tonsils with this instrument, that I could remove not more than one-half, so that I am not satisfied with the Sluder instrument. There is no question in my mind but that this instrument is an exceptionally good one in certain cases where the removal of the tonsils is indicated. I

have never been able to remove with the Ballenger modification which I have used, certain forms of diseased tonsils. While observing Dr. Ballenger, and he was demonstrating his instrument to one other member of the Association and myself who happened to be at one of his clinics, we found he could not do it. He had to do some of the dissecting with his fingers and did not remove the entire tonsil. You can remove the tonsil satisfactorily if it is the sort of tonsil you can remove quickly and satisfactorily with other instruments, but every now and then you strike one in which I at least have not been able to get satisfactory results from such an instrument. It may be possible for one to become sufficiently adept to use this instrument and get all of the tonsils that should be removed, but I have found it an impractical proposition from my standpoint, and the element of time is the only one that enters into it. Therefore, I agree with Dr. Daly that the question of only a few seconds does not make such difference when a man is removing a pair of tonsils.

Dr. Stapler: I have been in the habit of using the Sluder instrument since it came out, and I regard it as an excellent one. I have not had the difficulty in removing the tonsils with it in children that some speak of, and especially in grown people where the tonsils are small and where they have atrophied except for a few follicles, and these diseased follicles leave just a small part of the tonsil. I have not been able to remove this with the instrument. For the average child it is the best thing we have. You can do the work quickly. I put it on the tonsil and to stop bleeding I use a little adrenalin before doing the operation to relieve the condition, and after cutting I have not found any more secondary bleeding than I would where I did not use adrenalin.

I just want to endorse what the doctor said about the Sluder instrument. I think it is a good thing.

Dr. Archibald Smith, Atlanta: I am not familiar with this line of work, but since the question of hemorrhage came up I would like to suggest a preparation which I have found useful in controlling almost all forms of hemorrhage of this character. It consists of one dram each of iodine and zinc iodide, and four ounces of glycerin, with a little peppermint added, if you wish to do so. I have used this several times in tonsil operations

in controlling bleeding. I have also used it in controlling hemorrhage where a tooth was extracted, and it will stop such bleeding as that every time.

Dr. Martin: Do you use it locally?

Dr. Smith: I apply it locally with a swab.

Dr. Martin, in Closing: Replying to Dr. Daly, I think perhaps I was one of the earliest to use the snare in this country. A great many snares were devised, and I devised one myself that became quite popular, and I used it for a long time. But in using the snare you have to have three separate and distinct instruments. You have to have an instrument for separating the tonsil, an instrument for grasping it, and have a snare to pull the tonsil off. You do all that with this one instrument, separation, grasping, and enucleation.

As Dr. Lyle has said, he has not been successful with the instrument. I was not myself at first. I made the confession in my paper that I had to use it from twenty-five to thirty times, and I have had an extremely advantageous clinic. I had some kindergarten clinics where I took ten cases a day if I wanted to and tried the operation, and I could not do it successfully because I did not know how. Nobody can use that instrument successfully. The Ballenger modification has a grip to it. It interferes with the successful application of the tonsil and its removal. (Here Dr. Martin demonstrated the technic of the use of the Sluder instrument.)

In doing the operation one need not consume over half a minute in one operation, and I do not remember losing more than one ounce of blood. I have never had to reset the instrument except in one case.

At Macon, Bibb county, the medical inspectors of the public schools have been most efficient in their work. Superintendent C. H. Bruce, in his annual report, says, "Their work has almost revolutionized school work in Macon, resulting in a happier student body, more regular attendance and better conditions generally." Of 5,607 school children examined 4,319 were found with defects. Reports filed show that 2,508 children were treated for the defects pointed out by the inspectors. Dental defects were the most numerous.

TOBACCO AMBLYOPIA.*

**A. W. Stirling, M.D., M.B., C.M. (Edin.),
D.P.H. (Eng.), Atlanta.**

The value of an examination of the eye for diagnostic purposes in general medicine has, of course, long been recognized, but it is not always so carefully borne in mind that apparently local ocular diseases are merely symptoms of some wider dyscrasia which are most evident in the eye because its condition is continually being tested and because any abnormality in it is often at once apparent. It should be remembered, however, that the ocular tissues may be seriously and even acutely affected without the knowledge of the patient. I have seen a considerable number of persons who have been practically blind of one eye for many years without their knowledge, because the other sufficed for their needs, and both optic nerves may be in an advanced state of oedema with little or no apparent defect of vision. Still it may be stated that the eye affords frequently the first and the best indication of the condition of what is called the general health. I am thinking now especially of retrobulbar neuritis. In a paper read some years ago before the Southern Medical Association, I discussed the acute form of this disease which may be secondary to a number of general defects, among others probably auto-intoxication, and which has some peculiar and interesting features. It is to the chronic form of retro-bulbar neuritis that I wish to direct your attention for a few minutes today, and especially to that type which is secondary to the prolonged and excessive absorption of tobacco. But tobacco is not its sole cause. A number of other poisons may also be culpable. Among these are methylated alcohol, thyroidine, lead, aniline, disulphide of carbon, quinine, filix mas, nitro-benzol, wood spirit, arsenic, and iodoform, while similar changes may occur in diabetes. But it is probable that in these it is not precisely the same cells which are affected as in tobacco poisoning. We can hardly believe that in any of these cases merely because the condition of the optic nerve is most demonstrable, it is the only tissue in the body which is affected. Indeed, in tobacco cases it happens perhaps generally that a man may smoke to an equal extent for many years without

*Read at meeting of Medical Association of Georgia, Atlanta, Ga., 1914.

ocular symptoms, while his health has remained good, and that his vision will deteriorate along with his health. Some form of gastric derangement frequently precedes or accompanies tobacco amblyopia, and the gastric derangement may itself be due to the tobacco.

Sufferers from tobacco amblyopia are generally, of course, men, though some amusing records exist of the cases of women whose eyes have given them away. Patients are also usually upon the shady side of middle life; they rather often are self indulgent persons with a taste for the most available form of alcohol; they frequently smoke before breakfast, and they always smoke freely.

The form of their tobacco varies, but pipe smokers are said to be specially liable to amblyopia. It is true that an old well seasoned pipe is apt to exude poison more than a cigar. Besides, heavy smokers find the pipe cheap, and it is, therefore, much used by them. But I have seen a number of amblyopic cases among people who never use a pipe. Cigarette smokers appear less liable to this form of poisoning than either pipe or cigar smokers. The questions of the form of tobacco and its relationship to alcohol consumption are interesting and cannot be settled by the consideration of the habits of one country alone. Here in my observation cigars and both whisky and beer are chiefly to blame; in England, most sufferers smoke a very heavy pipe tobacco and drink beer; in France, de Wecker from his experience during the siege of Paris, concluded that alcohol was as blameworthy as tobacco, and that a combination of them was essential, but in France, while the tobacco is not so strong as English shag, the drinkers of absinthe chiefly suffer. De Wecker used to point out that among the Cubans and Spaniards, who, he affirms, smoke continually and chiefly cigarettes, while drinking very little alcohol, tobacco amblyopia was very rare. Amblyopia has been observed in quite a number of total abstainers from alcohol, and also in alcoholics who did not smoke. It should also be noted that the chewing of tobacco will produce a state of the nerve similar to that of smoker's amblyopia. Mr. Wray has drawn special attention to the coincidence of tachycardia and amblyopia, and to the fact that while cigarettes very seldom cause amblyopia they are the commonest cause of tachycardia. The symptoms of tobacco amblyopia are generally as follows: Things begin to be hazy,

especially in bright light, and new spectacles are sought. The vision with the glasses appropriate to the eyes is then found to have deteriorated probably to about 1-3 normal. Both eyes are affected, though not always equally. The wise examiner will then proceed to test the color vision. If he use a color square of even one cm. size, or if he forget to give the patient his reading glasses, an error may ensue. Two or three mm. squares of red and green should be employed, and one eye tested at a time. In tobacco cases the patient will not clearly distinguish these colors when he looks at them straight, though when held to one side of his visual line he may know them. Still, occasionally, color vision, for red especially, is lost all over the field. And this is the most reliable test, along with the ophthalmoscope of course, for tobacco amblyopia. But besides the scotoma for color, if a very small piece of paper be used, a scotoma for white will sometimes also be discovered. The ophthalmoscope, while it will negative other lesions, generally affords no positive assurance of tobacco poisoning. At the most the optic disc may be slightly pale, especially on the temporal side. There are, however, cases which are anomalous, in so far that they have marked visible changes in the nerve head. They may be merely specially severe cases, or they may be combinations of different affections.

If the patient will absolutely refrain from the use of the toxic agent the prognosis is good, otherwise optic atrophy may ensue. When we come to inquire into the local pathology of the condition, we find a peculiarly interesting example of the so-called selective affinity of some drugs. We find microscopically that the optic nerve is diseased in only one special bundle of its fibres, viz., that which supplies the macula. But, as has been shown microscopically in experimental cases and once in man, the trouble appears to begin in the Nissl granules of the retina, which are vacuolated and disorganized. A secondary degeneration of the nerve fibres results, which, according to Parsons, is first demonstrable after they have taken on their medullary sheaths behind the lamina cribrosa, but this change occurs only in the papillo-macular bundle. The probability is that there is no real selection in this case, and that this peculiarity is due entirely to the fact that the ganglion cells in the fovea and macula are more delicate than elsewhere. This explanation is supported by the fact

that scotomata occasionally occur in other portions of the field as well. (Cases Trans. Oph. Soc. of U. K., XXIV, p. 112.) A transverse section of the nerve shows therefore a triangular segment of degeneration upon the temporal side of the nerve close to the eye, and nearer the brain the affected area is central and round. In order that vision may be restored it is then essential that tobacco in all its forms be avoided, and it is certainly better also to prohibit alcohol. Tonics, such as strychnine, are usually of service, though at first potassium iodide and bromide may be better. Copious water drinking is advisable because nicotine is soluble in water. (Wray.) The chewing of quassia chips diminishes the craving for tobacco. I have frequently prescribed it with apparent advantage, while it also increases appetite.

I shall conclude by giving a mere outline of a few of the cases which I have seen during recent years in Atlanta:

Mr. J. M. K., age 57; night watchman. Vision has been falling off for two months. He says things look as they were in yellow moonshine. Until five months ago he smoked very heavily, and since then about five pipes daily. Alcohol doubtful. R. V. fingers at 6 feet, L. V. fingers at 4 feet. The optic discs have slightly hazy edges and the vessels are a little full. He cannot tell 1 cm. squares of red or green. In ten days he recognized these colors, and in twenty days more, after gradual improvement, his right vision was normal and his left 2-3 normal. I gave him strychnine and arsenic.

Mr. J. D. S., age 40. Complained of failing vision. R. V. 6-6 one-half, with correction, the same as it was years ago. L. V. 6-12 one-half. It was 6-6 before. He chews, and smokes six cigars daily, also drinks probably too much whisky. With R. can tell color, with L. can tell none with central vision. In two weeks the L. could tell red and green 1 cm. square; two weeks later 3 mm. square. He gained 18 pounds in six weeks under the usual treatment. Six years later he returned with vision in each eye about 2-3 normal. He had not left off his alcohol in the meantime, and was smoking twenty cigarettes and one cigar daily, but was not chewing. The right pupil did not act well to light, but did consensually and to convergence. In medium light it is smaller than the left.

Mr. W. H. D., age 40. For six weeks vision has been failing. It is now in right eye 6-9, in left 6-24, and he cannot tell red and green

with central vision. He smokes 25 to 40 cigarettes a day and two or three cigars, but has not smoked a pipe for a year. He admits six or eight drinks of whisky a day, but they appear to be long ones. Has indigestion. I advised a hospital and he left Atlanta.

Mr. J. B. J., age 55; a farmer. Has noticed failure of sight for four months. Used much alcohol and tobacco. The right is now 1-6 normal, the left is less than 1-10. In the right eye is some central choroiditis, and in the left some haze of the disc edges. Under Donovan's solution in two weeks he improved, so that from having central scotoma for red and green he could now tell them both, while R. V. was 2-3 normal and left 1-10.

Mr. P., age 49. Complains of loss of vision. R. V. 1-10, L. V. 1-6 normal. Smokes a pipe (heavy Havana tobacco) all day, and drinks much beer. The outer sides of the discs are pale, and with central vision he does not know red and green. He was unable completely to change his habits, and in two months his vision was still less than half normal. He died, I am informed, by suicide, not long afterwards.

Mr. E. D. M., age 56; engineer. Says his vision has fallen off for two months. It is now less than 1-6 normal in the right eye, and 1-10 in the left; central vision for color gone. He is very nervous and smokes half a pound of Duke's Mixture a week—indeed, he smokes all day. He also uses 3i of morphia a week. I do not know the farther history of this case and quote it merely on account of the morphia.

DISCUSSION OF DR. STIRLING'S PAPER

Dr. H. H. Martin, Savannah: This question that Dr. Stirling has presented is to my mind one that is very puzzling. The symptomatology and the pathology are more or less typical of the condition, but the etiology of retrobulbar neuritis has always been an incomprehensible subject to me. In my own experience I do not recall ever having seen a case where alcohol was not associated with the tobacco. But the curious thing in connection with this subject that has puzzled me is the small amount of tobacco that will cause this condition. I recall to mind more than one case where the victim smoked one or two or three times a day a pipe or cigar, but if he used alcohol along with it he had

tobacco amblyopia. I have never seen tobacco amblyopia in an excessive tobacco user unless he used alcohol with it.

One of the encouraging features of the symptomatology and the prognosis in these cases is they will always invariably get well if you stop them from using tobacco and alcohol. If you stop one and not the other, my experience has been they do not get well.

Dr. J. T. Maxwell: I wish to corroborate what Dr. Stirling and Dr. Martin have said and to add one or two points in regard to the uncertainty of the amount of tobacco used which may cause this trouble. I have seen a few cases in my work with Dr. Gifford in which the man smoked five cigars a day, and you hardly think it was possible that this number of cigars would cause the condition, but a discontinuance of the use of tobacco proved conclusively it must have been tobacco, because the trouble cleared up immediately. Then, again, we may see a man who smokes an enormous amount of tobacco all day long for half a lifetime before he has toxic amblyopia, and those who smoke very little get it.

In regard to tobacco and alcohol, excessive smokers also use some liquor, so that it is pretty hard to separate the two. I know of one marked case in which the man (I had known him for ten years) never took a drop of liquor under any circumstances, yet who had toxic amblyopia.

Dr. Cecil Stockard, Atlanta: I would like to emphasize the importance of stopping the use of tobacco absolutely. I remember one case that comes to my mind right now of a man who was smoking nine cigars a day, and he was told to stop it immediately. He went home, was not getting better, and I asked him if he was smoking, and he said no. It was found that he sat a while each day at his desk with an unlighted cigar in his mouth, and as soon as he stopped doing that he began to recover.

Dr. Stirling in Closing: The point brought out that smoking a small amount of tobacco will sometimes produce amblyopia is interesting. It depends upon some condition in the system, because a man will smoke for many years enormous quantities of tobacco, but as soon as he gets below par and has indigestion, or gets possibly into the early stages of senility, this affection will appear. It is uncommon to find it in young people who smoke very much.

The doctor referred to cutting off absolutely tobacco in such cases. That is very important. Once a man has become accustomed to the use of tobacco and its effect, the smallest possible amount will suffice, and one must be exceedingly cautious in accepting the word of a patient concerning the fact that he is not smoking. I had a patient who went back to the country where I could not keep him under observation, and he assured me he was not touching tobacco. I saw him on the corner one day puffing away at a cigar. At that time he was making very little progress.

Another point is the necessity of those dealing with railway patients to consider the question of tobacco amblyopia in them. It is a question of being able to distinguish between green and red lights. There are some railway employes who in smoking have an attack of amblyopia and it seldom makes them see less than one-third of normal vision; they may be able to see signals, but not to distinguish colors, and that is an important point. There ought to be some restriction put on railway employes in the use of tobacco and alcohol. Their vision may be diminished temporarily by the use of these two agents.

The modern diagnosis and treatment of disease cannot, at the present time, be made without the aid of the clinical laboratory, and we wish to call the attention of the readers of this Journal to the laboratories whose advertisements we carry and whose reliability and ethics are dependable. The physician may send to these laboratories any kind of specimen for diagnosis, and the result will help both the physician and his patient. Many physicians are not acquainted with laboratory technique, and by becoming acquainted with clinical laboratories of such high standing as these will often times derive more benefit than if they would take a post-graduate course.

The more money The Journal of the Medical Association of Georgia makes out of its advertisements the less it costs the State Association to run the paper. This means that every member of the State Association has an interest in the advertising columns. If one business firm advertises and another does not, patronize the one that does. It is money in your pocket.

FIRST AID TO THE INJURED EYE.***Albert M. Mason, M.D., Waycross, Ga.**

Eye injuries are quite common, as many of you who practice in manufacturing districts will agree. While some of them are preventable, it is not the purpose of the writer to enter into a discussion of the prevention of eye injuries, but, rather, to treat the subject of "First Aid to the Injured Eye," so it will be of interest, and, possibly, benefit to the general practitioner of medicine, who usually is called upon to treat these injuries, and does not always have the benefit of consultation with an ophthalmologist.

Unfortunately, eye injuries sometimes have a legal side, as well as a surgical, and it behooves us to guard against unpleasant *sequelae*. A record of the vision in both eyes should always be taken before attempting surgical interference or instilling any medicine into the eye, for it not infrequently happens that, following trivial injuries, damage to vision is claimed. If a record of the vision is taken and the patient informed of existing poor vision, it will forestall suits for damages that otherwise might occur.

The writer had such an experience recently. An apprentice in the railroad shops in this city was "struck in the left eye by a piece of steel." From the history given, he evidently had a foreign body on the cornea, which was removed by the surgeon at the hospital. Evidently his vision was not taken at the time, for when he presented himself two weeks later, it was with the intention of getting evidence for a suit for damages. His vision was 20-30 in the right eye, and 20-100 in the left. No scar was noticed upon the cornea. Refracting him under homatropine, it was found that with proper lenses normal vision could be obtained. He refused glasses, and gave up the idea of getting rich quick. Upon attempting to collect a fee, it was learned that he has left for parts unknown.

The first thing necessary in eye injuries is to recognize the amount of damage done; the second requisite is to apply treatment promptly.

The injured eye cannot be studied as a whole, on account of its intricate anatomical makeup. Accordingly we will first discuss

Injuries of the Lids.

"Black Eye," an extravasation of blood into the lids, is, perhaps, the most common and, at the same time, fortunately, the least harmful of injuries of the lids. It is caused by sudden contact with a clenched fist, by striking the face against an unseen door, bedpost or similar object, by falls, by being struck with an elbow or knee (not to mention fist) during a game of football, and by contact with any stationary or moving object of considerable size.

Unless the blow has been of sufficient force to fracture the bones of the orbit, face or skull, no permanent damage has been done.

A thorough history and examination should be made, however, to determine the severity of the injury, remembering that the hemorrhage in fractures of the base of the skull is delayed half a day or longer.

The treatment is ice-compresses held in place by a pressure bandage for the first twenty-four hours, then occasional hot fomentations and massage until the discoloration disappears, which takes place, usually, in ten days or two weeks.

After the blood has extravasated, Fox uses sedative lotions, such as solution of ammonium acetate and rose water, equal parts.

Those of you who have used beef steak on these eyes, will be glad to know that no less an authority than Edward Jackson believes in its efficiency.

Solution of Continuity of the skin of the lids are caused by sharp objects, knives, pieces of wood, metal, glass, meat hooks, etc. All wounds should be sutured under antiseptic precautions. In those in which the muscle fibers or the tarsus have been severed, the ends should be well approximated with catgut and the skin closed with silk. Small superficial cuts in a horizontal direction will heal without suturing, if thoroughly cleansed and dressed.

Burns of the lids are usually of the first degree (superficial). Destruction of the vitality of the epidermis and cooking of the corium, in which case the burn is of the second degree, are sometimes seen. Hot water (steam), caustics, acids, phenol, flame, molten metal, powder, etc., are the etiological factors. These burns are treated the same as burns of other parts of the body. Sweet oil, caron oil, 5% boric acid ointment, etc., will cause them to heal. Powder stears are removed by a vigorous scrubbing with hydrogen peroxide.

*Read at meeting of Medical Association of Georgia, Atlanta, Ga., 1914.

The cornea and conjunctiva should be examined, and if injured promptly treated as described later.

The conjunctiva covers the under surface of the lids and the anterior surface of the eye ball, so that strictly speaking there is the palpebral conjunctiva, and the bulbar conjunctiva. However, in the discussion of

Injuries of the Conjunctiva

we will consider it as a whole, as the effects from injuries are the same in both locations, with one exception, namely, subconjunctival hemorrhage of the bulbar.

Foreign bodies, such as grains of dust, sand, cinders and ashes, lint, eyelashes, etc., are of frequent occurrence. Some of these are washed away by the tears; others are seen on the bulbar conjunctiva; others stick to the under surface of the upper lid near its edge, where a shallow depression, the *sulcus subtarsalis*, forms a convenient place of lodgement; while still others get into the retrotarsal fold, where they are capable of remaining for months without any inconvenience to the patient.

The usual symptoms are pain, photophobia, blepharospasm and lacrymation—the pain, which is sometimes severe, being caused by the foreign body being carried across the cornea with every excursion of the lids.

Those resting on the conjunctiva of the globe should be washed away with sterile water or normal saline, or brushed off with a cotton-tipped probe or toothpick. Those on the under surface of the lids can only be seen by everting them, while those in the retrotarsal fold are brought into view by the following procedure: After everting the lid in the usual way, press down the fold with a blunt instrument, at the same time holding to the lashes with the fingers of the other hand. In either case the object is wiped off with the cotton-tipped probe.

Unless the object has been in the eye for several hours, no bad results are encountered. The writer makes it a rule, however, to give the following solution to be used freely every hour for several hours:

Ac. Boric.	gr. x
Sol. Adren. Chlo.	m. x
Dest. Hamamel.	5 1
Aq. Dest.	q. s. ad. 5 1

Burns of the conjunctiva are caused by acids, alkalies, lime, hot metal, steam, etc. Those from acids (sulphuric, hydrochloric, nitric, etc.), alkalies (hot metal, steam, etc.,

are grayish white, while those from lime are white from the lime contained in the burned area.

The eye should be treated at once. All foreign substances (hot metal, lime, etc.) should be washed out immediately with cold water. Prior to Andreae's published report it was claimed by ophthalmologists that water in contact with lime would produce sufficient heat to injure the eye still more. But it is now an accepted fact that the burn from lime is chemical and not thermal.

For acid burns neutralizing solutions should be used after irrigating the eye with cold water. The following are recommended: 1% solution of sodium bicarbonate or potassium bicarbonate, lime water and milk.

For alkalies use dilute acetic acid or dilute vinegar.

For lime we employ a 2% solution of ammonium chloride.

If the pain is severe 10% halocain may be used. In all these burns the one thing to guard against is the formation of adhesions between the raw surfaces of the conjunctiva. To prevent this castor oil should be dropped into the eye frequently, and a probe should be passed between the surfaces at least once a day.

Burns from acids, alkalies and lime demand prompt treatment. The writer keeps three solutions in his office ready for instant use. One is lime water, labelled, "For acid burns;" the second is Dilute Acetic Acid, labelled, "For alkali burns;" the third is a 2% solution of Ammonium Chloride, labelled "For lime burns." A few minutes saved by having these solutions on hand and ready to use may be the means of saving some unfortunate from suffering and blindness.

Subconjunctival hemorrhage occurs from violent sneezing, vomiting, coughing, etc. The treatment is the same as for ecchymosis of the lids, ice compresses followed by hot fomentations.

Cuts and scratches of the conjunctiva usually heal without attention. Argylol should be used a few times to prevent infection from taking place. This drug—argylol—is, undoubtedly, the means of saving a large number of eyes that would otherwise be lost. It is absolutely harmless. In fact, it is used in the anterior chamber with good results in infections. The strength of the solution recommended by the various writers is 50%. The writer has been using a 12% solution until recently, but has found the

50% solution so much more efficient that he will use it in all future cases.

Injuries of the Sclera

may be classified into (a) non-perforating and (b) perforating wounds, (c) foreign bodies, and (d) rupture.

Non-perforating wounds are caused usually by scratches from pencils, hat pins, claws of animals, etc., at which time the conjunctiva is, necessarily, injured more or less. Thoroughly cleansing the cul-de-sac with 1-10,000 bichlorid solution, instilling 50% argyrol, followed by White's ointment,* or 5% iodoform ointment (Wurde mann) and a bandage, will result in healing taking place within a few days.

Perforating wounds of the sclera are caused by the same things that cause perforating wounds of the cornea, which will be discussed under that head. As a rule they are complicated by wounds of the ciliary body, vitreous and choroid, and prolapse of the iris. In some the lens is ruptured, in others almost the entire contents of the globe escapes.

The eye should be thoroughly cleansed with 1-10,000 bichlorid solution, prolapses of the iris removed by iridectomy, of the vitreous and choroid by cautery (Wurde mann), argyrol instilled and the cul-de-sac filled with White's ointment and a bandage applied. If there is much loss of lens substance and vitreous and the ciliary body is injured, enucleation or evisceration should be done immediately.

Foreign bodies in the sclera are not very common. They are, as a rule, easily removed with forceps, after dissecting the conjunctiva away.

Rupture of the sclera follows blows upon the eye. The usual site is near the margin of the cornea. The iris is torn away from its insertion, the ciliary body is injured, the lens dislocated, the vitreous escapes, the retina and the choroid become detached, iridocyclitis develops and the ball atrophies.

Enucleation or evisceration should be done immediately, for the sooner such an eye is removed, the less the chance of sympathetic disease.

Injuries of the Cornea

Occurring synchronically. In dealing with injuries of the cornea the first thing to re-

member is **not to use cocain**. Cocain destroys the vitality of the cornea, causing it to become cloudy and exfoliated, for it injures the corneal epithelium, and, by making it insensitive, causes it to become dry from a failure of the lids to wink. If an analgesic is used—and these patients usually beg for relief from the pain—let it be dionin 5% or halocain 10%. Of the two dionin is the better.

The cornea has no blood vessel, deriving its nutrition from the surrounding tissues, and for this reason we should also remember not to use ice in treating corneal abrasions, because it will hinder osmosis.

Non-perforating and perforating wounds, foreign bodies and burns constitute the usual injuries of the cornea.

Non-perforating wounds are classified by Weeks as (a) contusions, (b) abrasions, (c) incised and lacerating wounds.

Contusions result from blows directly on the cornea or through the lids. The result is corneal opacities which may or may not remain permanent, reduction of vision and even atrophy of the globe.

Atropin (gr. iv to the ounce) and absolute rest, by means of a bandage, should be prescribed immediately. Most men in general practice seem to have a hesitancy in using atropin, and some who do use it prescribe weak solutions. Four grains to the ounce of water is the strength that should be used.

Abrasions. Light glancing blows from most any small object will cause abrasions or erosions. In this condition the pain is very severe, the lachrymation profuse. Small abrasions can be detected by staining the cornea with a 2% solution of flourescein, the abraded surface showing up green. The object of treatment is threefold: to relieve the pain, to prevent infection and ulceration, and to put the iris muscle at rest; 5% dionin or 10% halocain will relieve the pain. Cocain should not be used, for, as already stated, it destroys the vitality of the cornea, which, of course, interferes with the process of repair. Irrigating the eye with 1-10,000 bichlorid solution, instilling argyrol, using White's ointment, and applying a bandage which should remain for a day will, in most cases, give a complete recovery without a scar. Homatropin, 2%, may be used in the eye when first seen, if there is a likelihood of an iritis developing. This will dilate the pupil sufficiently to prevent adhesions forming between the iris and cornea or lens.

*Hydrarg. Bichlorid gr. i. Sod. Chlorid. gr. iv. Vaseline. Alba. 3vi.

Should an iritis develop, however, atropin should be substituted for the homatropin solution.

Incised and lacerating wounds are caused by the cornea being struck by flying pieces of metal, stone, wood, etc., which render this class of injuries prone to infection. Treatment is the same as in abrasions, except that atropin is used instead of homatropin.

Perforating wounds are always cases of doubtful prognosis, and should be promptly and properly handled. A small number of them are uncomplicated, while the majority are complicated by injuries to the iris, lens and ciliary body, by infection, and sympathetic disease, irritation or inflammation.

Uncomplicated wounds heal rapidly under antiseptic washing, atropin, argyrol and the bandage.

A complicated injury leaves the eye ball open, anterior chamber shallow or abolished, tension minus, iris prolapsed, lens substance and vitreous escaping, and possibly a foreign body within the globe.

With such an injury, the first thing to do is to irrigate the parts with sterile water or bichlorid solution, 1-10,000. Next we liberate the iris from the wound, if there is a prolapse, by (1) replacing it with gentle strokes with a spatula, or, if this is impossible, by (2) excision, after which we keep it quiet by using atropin.

If the lens is broken up, in which case we have a traumatic cataract, as much of it as possible should be let out of the anterior chamber through the original wound. This is accomplished by irrigating the anterior chamber with normal saline or sterile water through an irrigator or a curved medicine dropper, and by use of the spatula. Argyrol, atropin, White's ointment and a pressure bandage complete the toilet.

If very much of the contents of the globe is lost, if infection has already set in, or if in our judgment sight is hopelessly lost, the globe should be removed immediately to prevent sympathetic disease.

In all perforating wounds of the cornea there is a possibility of a foreign body being within the globe or orbit. Steel is demonstrated and removed with the giant magnet; non-magnetic bodies are demonstrated by the X-ray. Attempts should be made to remove them by making an incision through the sclera at the sight of lodgement shown by the skiagraph. Failure to do this means an enucleation sooner or later.

It is a good idea to always try the magnet for supposed pieces of stone, copper, etc., especially so if the injury occurred while chipping with a hammer or chisel, for it is possible that the foreign body is a chip from the steel tools. The writer remembers a case seen in Atlanta, in which the boy was chipping granite with a hammer. A piece of what was thought to be stone flew off and, penetrating the eye through the cornea and lens, was retained. So much of the lens substance escaped that the foreign body could be seen with the ophthalmoscope. It responded to the magnet and was removed through the original wound in the cornea.

Foreign bodies are either lying on the cornea or imbedded in its tissues. Those lying on the surface can be brushed away with a cotton-tipped probe, while those imbedded, such as hot sparks, particles of emery, metal chips, etc., are removed with the spud.

It is difficult, sometimes, to locate very small objects on the cornea. To do this oblique illumination through a strong lens is used. If we are unable to find it by this method, we use the fluorescein solution, already mentioned.

The method of procedure in picking out foreign bodies with a spud is as follows: Anesthetize the cornea with 4% cocain solution. The patient is seated facing a good light, with his head resting against the body of the surgeon who stands at his back. The eyelids are held apart by the fingers of one hand, while the object is removed by the spud held in the other.

Irrigation of the cul-de-sac with the 1-10,000 bichlorid solution, instillation of argyrol, and the application of a bandage complete the operation.

Burns of the cornea, like those of the conjunctiva, are caused by acids, alkalies, lime, hot metal, molten glass, etc. They are either superficial or deep. Superficial burns, in which only the epithelium is destroyed, heal in a couple of days without a scar. Deeper burns, in which the **substantia propria** is destroyed, are followed by ulcer and opacity.

Treatment is the same as for burns of the conjunctiva, with the addition of halocain for anesthesia, dionin for pain, and atropin.

Injuries of the Uvea

include injuries of the iris, ciliary body and choroid.

Wounds of the iris occur with perforating

wounds of the cornea and sclera and rupture of the latter. Treatment of simple wounds is atropin. Prolapses have already been mentioned under wounds of the cornea.

Wounds of the ciliary body have been mentioned under wounds of the sclera.

Injuries of the choroid include rupture, hemorrhage and perforating wounds. Hemorrhage and rupture result from non-perforating blows. Treatment is rest in bed. Perforating wounds follow perforating wounds of the sclera. Treatment consists in closing the scleral wound and asepsis.

Injuries of the Lens

Have already been discussed. First-aid treatment consists in removing as much of the lenticular substance as possible through the wound in the cornea, and attention to the other injured parts.

Penetrating wounds, prolapse, concussion, hemorrhage, rupture and foreign bodies constitute the principal

Injuries of the Retina.

Penetrating wounds, generally with prolapse, occur when all the tunics of the globe are penetrated. Small wounds, in which only a small amount of vitreous is lost and no prolapse, heal with little loss of vision. Treatment consists in closing the sclera and antiseptic dressing, with rest in bed.

Prolapse always occurs in large wounds. The loss of vitreous is considerable, sometimes the entire contents of the globe escaping. Treatment is enucleation.

Concussion, an oedematous opacity, follows blows on the eye. Frequently, no doubt, it goes to complete recovery undiagnosed. Uncomplicated cases recovered within a week or more under atropin, the bandage and rest.

Hemorrhage occurs as the result of blows. The diagnosis of this is made by ophthalmoscopic examination. Treatment is rest, atropin, pressure bandage and alteratives.

Rupture occurs with rupture of the choroid and sclera. Treatment is rest.

Foreign bodies are pieces of steel, iron, glass, copper, bullets, etc. Ophthalmoscopic examination and the X-ray locate them. Magnetic bodies are removed by the magnet through the wound. Others call for enucleation.

No attempt has been made to describe, or

even mention, all injuries of the eye, or to give treatment for the various complications mentioned under the separate headings. The patient's interests will be best conserved by consultation with an ophthalmologist in the severer injuries, in those in which, for any reason, you might wish to share the responsibility.

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DISCUSSION OF DR. MASON'S PAPER.

Dr. J. T. Maxwell: Dr. Mason in his paper gave us a wonderfully large collection of useful hints, and we would do well to re-read his paper when it shall have been published.

In regard to ecchymosis or extravasation of blood below the conjunctiva, he spoke of using the same method that he did in ordinary black eye. Professor Fuchs, of Vienna, has a unique method of controlling bleeding below the conjunctiva which I saw him demonstrate very nicely in Vienna last year. He injects sterile air below the conjunctiva. He takes the ordinary hypodermic syringe which has been sterilized, puts it in a gas flame or alcohol flame, and draws the air into the syringe, and after putting cocaine on the conjunctiva injects the air below the conjunctiva. Little bubbles form there which seem apparently to cause no inconvenience to the patient, and on the second day he injects it again after the first air has disappeared, and the effect is very good. The blood will disappear much quicker than by any other method I have seen used, and he says it is quicker than any method he has seen used.

Dr. A. W. Stirling, Atlanta: I did not hear all of the paper, but there are only two points which I would like to discuss of those which I heard. One was the report mentioning argyrol as being entirely innocuous. That is so. There is no drug that affords the patient more comfort than argyrol; at the same time I should like to throw out a warning which I have discovered in my own experience, and which has been discovered by others possibly, and that is, if one injects argyrol into the lacrimal duct, immediately after having opened the duct by forcible means, there is apt to be set up an exceedingly acute inflam-

mation. I have seen that twice, and I would like to warn my friends and neighbors to avoid doing that until the wound in the duct has healed.

The other point I would mention is with reference to the use of atropin by the general practitioner. It is a point to which I have drawn attention a number of times, and in my opinion it is much wiser to avoid the use of atropin than be too sure in using it, because I have myself seen a number of cases of glaucoma that have been brought about by the use of atropin by those who did not understand its uses. Unless a man is absolutely certain of anything of that kind in the case, he should be cautious in using a mydriatic in the eye.

Dr. Mason, in Closing: There are one or two points I would like to repeat and emphasize. One is not to use cocain on injured corneas, as I stated in the paper, as it destroys the vitality of the cornea, and in dionin we have a drug that almost instantly gives relief from pain, either dionin or hallo-cain.

In regard to the statement by Dr. Maxwell about sub-conjunctival hemorrhage, I think the method he mentioned is worth trying. That is the first I heard of it.

With reference to the remarks of Dr. Stirling, the atropin I mentioned was not in cases of eye injuries only, but in cases of injuries of the cornea. It is not the purpose of the paper to try to get general practitioners to take up the treatment of eye injuries or eye diseases, because we are more or less dependent upon them for our living, but there are a number of cases where proper treatment at the beginning would save the eye.

Last month a farmer at Waycross, who was plowing, had the misfortune to plow up a stick that hit him in the eye, and unfortunately for him he got into the hands of an old quack down there who, in the last few months, has been attempting to do eye work. From him he received a prescription for boric acid which he used for about eight days before I saw him. When I saw him he had a nice case of irido-cyclitis already developed, and after ten days trying to relieve pain the eye went on to enucleation. It is due to the general practitioner, who sees the majority of these eye injuries, especially those doing contract practice and are out in the rural districts, to appreciate these injuries and give some first aid treatment until

you can get consultation with an ophthalmologist, which will be of benefit both to yourself and particularly to the patient.

A CONVENIENT FACE SHIELD FOR NOSE AND THROAT WORK.*

Cecil Stockard, M.D., Atlanta, Ga.

Probably every one of you has had the unpleasant experience of having a patient cough or sneeze in your face while you were making an examination of his nose or throat; and many of you have suffered from more or less serious infections acquired in this manner.

After considerable annoyance along this line, I began to look for some means of avoiding such trouble, and first tried wearing a glass "windshield" in front of my head mirror. This I found effective, but so heavy and inconvenient that its use was soon abandoned, and I began trying to construct a shield that would be effective and at the same time convenient; and at last conceived the idea of making a cup-shaped shield of transparent celuloid with a metal clip to be hooked onto the front of spectacles.

The advantages of such a shield are at once apparent; it is effective, light, almost invisible, convenient to put on and off, cheap, and a fresh piece of celluloid can be easily placed in the clip when the old one becomes torn.

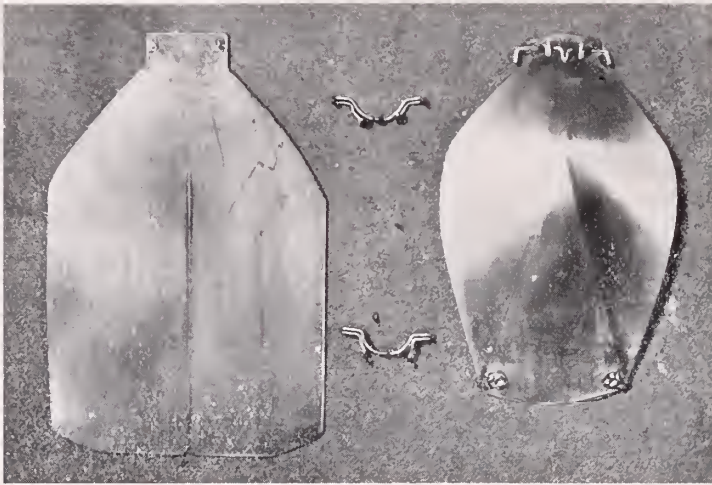
A reasonable amount of care is necessary when working near a flame, as the celluloid is very inflammable.

I have been using such a shield for some time in private practice, and more recently in the clinics of the Anti-Tuberculosis Association and Atlanta Medical College.

For the man who does not wear glasses the clip should be attached to a light spectacle frame fitted with plain glass, as this gives perfect protection to the eyes as well as to the air passages.

In a recent number of the Journal A. M. A., Drs. Crouch and Clapp of Baltimore described an aluminum shield of similar shape, which is permanently fixed to a light spectacle frame. This, however, is less convenient in most cases, it is not transparent and not easily interchangeable, which features render it far inferior to the apparatus as described above.

*Read at meeting of Medical Association of Georgia, Atlanta, Ga., 1914.



It seems to me that this attachment should appeal to, and be used by every nose and throat man, dentist, pediatricist, and every one who is called upon, even occasionally, to make nose and throat examinations.

DISCUSSION OF DR. STOCKARD'S PAPER

Dr. Dunbar Roy, Atlanta: I looked at the shield Dr. Stockard has presented, and it is a most excellent adjunct to nose and throat work—in fact for anyone, as he suggested in his paper, who has to treat nose and throat cases, particularly the pediatricist who has to look after and treat children. I think doctors, as a rule, ought to wear something over the nose and mouth to keep any expectoration out of these cavities, because in a struggling child, where you try to look at the throat and the child coughs and spits out, there is no telling when you may have a serious infection, and this little shield is very much better than anything I have seen, and it is light. It can be easily adjusted and meets the purpose admirably, and I think we are to be congratulated that the doctor has presented it before the association.

Dr. Stockard, in Closing: I wish to thank Dr. Roy for his kind remarks. I did have in the fall three colds that I could absolutely attribute to patient's coughing in my face before I began the use of this shield.

The Atlanta Optical Company will furnish this shield if there is sufficient demand for it to warrant making it.

MASTOID OPERATION WITHOUT ARTERY FORCEPS OR LIGATURES.*

**John J. McLoone, M.D., Phoenix, Ariz., and
Richard M. Nelson, M.D., Atlanta, Ga.**

In the eye and ear clinic, Colon Hospital, Canal Zone, we decided to utilize in all suitable mastoid operations an idea that had occurred to Dr. McLoone while resident physician, Episcopal Eye and Ear Hospital, Washington, D. C.

After the usual preparation of the field of operation, we outlined lightly in the skin, with a scalpel, the exact form and extent of the proposed incision. We kept two Allport retractors ready for instant use. With a scalpel a deep cut was made through the soft parts down to the periosteum, following the previously outlined skin incision. Quickly incising and elevating the periosteum, we inserted the Allport retractors with more than the ordinarily used pressure. Immediately all bleeding was arrested. When we enlarged wound during operation, we shifted the nearest retractor into freshly cut part of wound. After necessary bone work, retractors removed. No spurting vessels needing tying. Oozing from bone controlled as usual by packing.

In 1912 in a series of mastoid operations extending over several months, we did not find it necessary to use artery forceps or ligatures at any stage of any operation. It so happened that all our cases during this particular period were suitable ones for the em-

*Read at meeting of Medical Association of Georgia, Atlanta, Ga., 1914.

ployment of this technique. Of course in young children the usual precaution taken in making the post-auricular incision higher and more posteriorly than in adults, to avoid wounding the facial nerve, is even more necessary if this technique be attempted. However, we would hesitate very much in attempting ourselves, or in advising others to attempt this technique in children. Because of the softness of the skull at this time of life, and, in addition, the fact that in the young the bone is so apt to be widely necrotic, it is undoubtedly much safer to cut through the skin, soft tissues and periosteum by separate strokes of the knife. Much pressure might easily cause the scalpel to penetrate the cranial cavity with disastrous results. In adults I have seen only two cases in which severing the soft tissues with one stroke might possibly have proven dangerous if this had been attempted. In both cases the dura was exposed after incision and elevation of soft tissues. In one the opening through the skull was in the region of mastoid antrum, in the other in the temporal region. In both there was large subperiosteal abscess, and hence the periosteum and soft tissues were raised some distance from the bony openings, and very possibly this very thing would have served to prevent much of the danger dreaded.

It is possible that many others have used the same method. Indeed it is not at all improbable that at least some of you gentlemen present at this meeting have done so. To you we humbly apologize. But we must add that, in whatever discussion our paper may be honored with, we will for obvious reasons listen with especially keen interest and appreciation to any criticisms or suggestions from those having made actual use of this idea.

Considering its simplicity, we have been surprised to find such scant mention of this modification of the usual operative technique in the literature at our disposal. Ballenger of Chicago, in his excellent text book (1) omits all mention of artery forceps from his description of the operations upon the mastoid process. Other authorities, such, for instance, as Politzer (2), Barnhill and Wales (3), and Denchs (4), mention hemostatic forceps prominently and apparently look upon them as indispensable.

I must state just here that I had hoped we might have the pleasure of having Dr. McLoone here in person to read or discuss

this paper, which at his request we decided to make a joint one, though the original idea was entirely his. But unfortunately he finds he cannot come East at this time, and hence I will have to do the best I can to try to speak for him. He told me that one very competent aural surgeon in Washington, at his suggestion tried out the idea successfully in an operation in which he assisted. With this exception he never saw it given a trial until he became associated with me at Colon Hospital, and at his suggestion we began to employ it.

For myself I may state somewhat as follows: In eleven years' experience since graduation, while on either resident or visiting staff of general or special hospitals doing much surgery, in Baltimore and elsewhere, I never heard this suggestion made nor saw it utilized until we tried it together. After adequate general hospital training, I have had rather a wide opportunity for observation in my specialty. I served two years as assistant surgeon on the visiting staff of the Presbyterian Eye, Ear and Throat Charity Hospital of Baltimore, and six years as chief of Eye and Ear Clinic, Colon Hospital, Canal Zone. While holding the latter position, I frequently crossed the Isthmus of Panama to Ancon, and saw much operative work there also, through the courtesy of the chief of the Eye and Ear Department of Ancon Hospital, at times having operated there myself. Colon Hospital was an acute hospital of 600 beds. Ancon Hospital had 900 beds for acute and 300 for chronic cases.

While Dr. McLoone was in Washington and while he was in Panama, he had equal opportunities with myself for seeing much operative work, both general and special. And yet I must repeat the fact that neither of us has seen any other operators follow exactly the technique we used, or follow any similar technique.

From all that has been said thus far, therefore, it would seem not very unreasonable for us to conclude that the idea suggested in the title of this paper is still, to the vast majority of otologists, if not a new idea, at least a suggestion that is not put to as frequent or as general practical use as it would seem to us to deserve.

In conclusion, we wish to state that we claim for this method not only a saving of valuable time in operating, but also that it entirely does away with the trauma of the

soft tissues unavoidable where forceps and ligatures are used. In other words, that in suitable cases not only is the operation itself materially shortened, but also the healing of the wound.

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THE HIGHER EDUCATION IN SURGERY.

Edward H. Bradford, M.D., F.A.C.S.,
Boston, Mass.*

The American College of Surgeons has shown such remarkable vigor in its development that there is every reason to believe that it will become a most important agency in the advancement of American surgery. It may therefore be proper to call to your attention a few suggestions for the consideration of this organization relating to better education and training of our surgeons.

It has been said by those who undertake to study the American people that the typical American, although energetic, resourceful, and venturesome, lacks a knowledge of fundamentals. He has the defects as well as the virtues of the pioneer. Are these traits characteristic of the American surgeon? If they are, the fact should be reckoned with in our plans for the training and education of our surgeons. We should foster the energy of the pioneer and give to him the fundamental knowledge needed by a master.

In the early days the aspirant in surgery became the student of the nearest active practitioner to whom he could attach himself. He was an articulated assistant. After a while he ventured upon practice alone, and in the rough school of experience, competition, and emergency, he developed force. Later, groups of forceful men associated themselves together and formed proprietary schools, and the country was filled with energetic aspirants in surgery.

There are advantages in this system of education in a large, new, and unsettled country—the training fits the locality. It

does not, however, tend to develop thoroughness or scholarship.

The European method of educating surgeons was to collect students in the large cities, where they were taught by learned men the fundamentals of knowledge in medicine and surgery. They learned anatomy and were stimulated by watching the great surgeons at work in their hospitals. Besides learning the essential principles they acquired high standards.

The product of the American system of educating surgeons has been excellent. There have been developed some remarkable men and as alert and resourceful a body of skilled surgeons as can be found in any country. But can we claim to have produced many of those who have done most to influence the surgical thought of the world? We developed Ephraim McDowell, but we have yet to produce a Lister.

In this connection it is interesting to reflect upon how much more America, a professedly peaceful country, has done to revolutionize the science and art of war than the humane art of surgery. The advance in open order, field entrenchment for the attacking army, the use of cavalry in long raids on the enemy's line and as mounted infantry, improved implements of war, the rifle, the automatic pistol, the Hotchkiss gun, and in naval warfare, the ironclad, lateral shell firing, the torpedo, the mine, the submarine—all are products of American invention, or first shown to be of value by American example. The field telegraph, the heliograph, the telephone, and the American invention, the flying machine, have revolutionized war. During the same period surgery has been revolutionized, but how much can we justly claim that America has contributed to the marvelous changes wrought in the last fifty years?

There is another criticism of our present surgery, applicable to all modern surgery, but perhaps more so to this country as it is especially exemplified in our surgery. It is claimed that surgery today is overdone: that as in the past there was polypharmacy, today there is polysurgery, and that there is danger of needless, heedless operating. Are there just grounds for this accusation?

If we can imagine the great masters of surgery of the last century looking down upon a modern surgical amphitheatre, can we not fancy that they would be filled with astonishment, perhaps also with horror? Horror in

*Delivered at the Convocation of the American College of Surgeons, Washington, D. C.

the thought of the many lives sacrificed in former times through the ignorance of the simple laws of asepsis, but also horror perhaps at the number of operations done now, where Nature, if given a fair opportunity, could cure and perhaps cure more satisfactorily.

If the surgeon in the past, more than his modern successor, killed in his operations, he maimed less. Afraid of a possible fatal result he operated only to save life—never to determine the nature of the disease; exploratory operations were unknown. Today an operation is too often undertaken on a chance of benefit; subsequent operations follow to relieve the scar tissue caused by the first operation, which, unsuccessful in furnishing relief, was thought successful in that the patient did not die but lived with symptoms somewhat relieved by changed environment.

Do not modern conditions favor the development of surgery of this type rather than the training of the surgeon who knows when not to operate? It is unquestionably the function of this organization to promote the development of surgeons who are not simply hands for such general practitioners as, unable to make a diagnosis or direct further treatment, turn for help to their more venturesome colleagues. There should be surgeons of broad minds thoroughly familiar with methods of diagnosis and capable of forming a judicial opinion as to the relative value of both operative and non-operative treatment.

Surgery in its lower grades may be a specialty requiring chiefly the skill of trained hands, but the master surgeon covers the whole field of art of healing. The corps commander today must be trained as an engineer, but if he is only that he will never prove himself a great commander.

Fortunately for our profession and for the community there exist influences which can check the narrowing and debasing influences which hinder the full development of the science of surgery among us. Schools, hospitals, research institutions, surgical societies, universities, and an organization such as this American College of Surgeons, can aid powerfully in promoting the elevation of the noble art of surgery to a higher plane than it has ever attained before.

Our medical schools today have, thanks to the energy of our medical profession and the influence of the American Medical Associa-

tion, been brought to a standard state of efficiency, and no medical student can become a practitioner who has not received a proper knowledge of the fundamental sciences. When he reaches the stage of practice, he should know how to use his knowledge on lines of trained reasoning, or appreciate the arguments of those who do.

If the graduate desires to practice surgery, he should be trained as a dresser and should, after finishing his medical education, have opportunities for technical training in surgery by service in hospitals that need properly qualified assistants in surgery and residents.

The hospitals should do more than give positions to young men who help in the surgical work of the hospital; they should arrange for their careful training in surgery.

Endowed hospitals today should not be content to care merely for the sick in their wards; they should aid in the combat with disease. There should be connected with every hospital, not only nursing and operating facilities, but also agencies for determining the ultimate results of operative procedures. The hospital should be a clinical laboratory for the acquisition of knowledge relating to the surgical care of those surgically afflicted. A proper valuation of surgical methods is essential, and for this terminal results must be tabulated. This can only be done by efficient organization; it cannot be properly done by the desultory efforts of a few energetic surgeons.

Research and animal experimentation are aids; but experiment being impossible in the human animal, sound generalization is only possible when based upon a large number of carefully recorded cases collected in large hospitals and studied by a number of trained observers. This is the proper work of hospitals, and they should be rated according to their efficiency in such work.

From hospital residency the young surgeon can develop further as a junior associate to a broad master in surgery, who should encourage such association and should promote individual effort and independent thinking of the properly trained who seek to advance themselves to mastership by thorough preparation and carefully considered experience.

Much work by an association like this is needed to promote a proper knowledge in the community of the need of co-operation of hospitals in the work of the development

and education of surgeons. It is not only in the arrangement for dressers and residents that this is needed, but also in a suitable arrangement of the services of attending surgeons, that it may be possible to utilize the experience gained for the benefit of the science of surgery. Short services, interrupted services, services so arranged that generalization in regard to methods is difficult, if not impossible, are too frequently provided for in hospital organization. The surgeon spends his energies centering his attention upon individual cases, presenting few surgical problems, and is unable to devote his time to the larger problems of the treatment of disease in general. The younger surgeon may be perfectly competent to take care of the individual case, but the surgeon of experience with various methods should be given an opportunity to direct the treatment and to determine the value of improved methods. In many cases this causes disarrangement of existing hospital services, but where the authorities are aware of the need of such changes they can be brought about to the benefit of surgical science.

The road to the leadership in surgery is a long one. If "art is long," surgery is longer. It may take but little time to teach a man to play the violin, but for a virtuoso—a Kreisler—years are needed, but how much more is required to develop a Mayo, a Kocher!

How much can our societies aid in the better education of surgeons?

The only real education is self-education. This is helped by opportunities of comparison with others; the discussions of colleagues reveal individual strength and weakness.

Surgical societies should be organized so as to promote the careful study of surgical problems, the value of methods, a proper standardization of treatment, and should discourage the exploitation of individual success. Little benefit could come from a meeting of Jack Horners, though a discussion among them might furnish entertainment. Co-operative work among surgical societies would be of great value in the direction of study, the promotion of interest, and in the elevation of standards.

A more difficult matter suggests itself in the question of the bestowal of proper degrees and titles. The public has become trained with more or less accuracy to distinguish between the incompetent and proficient in music. Would it not be well if there

could be some accepted standards of recognition of the trained and judicious in surgery, as compared with those whose qualities are chiefly energy and boldness, driving forward an untrained mind—who are, in short, surgical adventurers? Masterly skill in surgery is not a quality easily recognized by the public. The death rate was formerly a check to the injudicious surgeon; today, thanks to asepsis, there should be no death rate, and it is hard to follow the trail of failure among the convalescents who rejoice in a recovery from what has seemed to them the jaws of death, nursing their impaired activities with satisfaction in the thought of what might have been and what they think they escaped from.

Could it not be a function of the American College of Surgeons to aid in a movement to standardize surgeons? There are apprentices, journeymen, craftsmen, masters, and past masters in the arts. Could we not help the community if we were to grade and rate surgeons as assistants in surgery, i.e., medical graduates, bachelors in surgery, masters in surgery, doctors in surgery? Should there not be a high degree of honor for great surgeons comparable to that awarded to statesmen or lawyers in the Doctor of Laws?

American surgery will be advanced if there are developed in this large country of ours several foci where the art of surgery is practiced and taught in the highest degree of excellence. It is a great satisfaction to the observer to see, already, centers developed where the work is worthy of the careful consideration of the leading surgeons of the world. An increase in the number of these places where the science of surgery is investigated and the art of surgery efficiently practiced cannot fail to produce results which will, in time, claim leadership in surgical thought.

A few words only are needed in regard to the question of what may be termed surgical ethics, a subject which cannot be ignored by an association like the American College of Surgeons, which is to maintain the standards of our profession.

If it is borne in mind the great opportunity which exists for the gross misuse of the power the surgeon holds it might seem extraordinary that so little of gross commercialism or base malpractice exists. The surgeon at the head of a small private hospital has power greater than that of a czar. Under an organization trained by himself, with no

one but his attendants to criticise his activities, he wields a power controlled only by his conscience and his higher instincts. It may be said that in the process of his education and in contact with his fellowmen no one can rise to eminence in surgery without an education which elevates him from the baser temptations which are more potent in other callings. It certainly is true that in this commercial age medicine and surgery are less commercialized than any of the other large human activities. Michiavelli, the great thinker of the period of the Renaissance, held up the standard of the ideal prince whose craft and deceit were regarded as the proper functions of the ruler and statesman, but we have no evidence that the surgeons of that time were other than truthful and honest.

Today the philosophy of the superman, that might makes right, will never find acceptance in our profession. As the soldier must have courage, and the priest and clergyman purity, the surgeon must be human.

It cannot, however, be ignored that the danger of lowering the standards among young and ambitious surgeons, eager for the renown and emolument of a large practice, is something which must be considered by an organization like the American College of Surgeons. There can be no compromise in this matter. Any one practicing the art and science of surgery who is unmindful of the high responsibilities and duties of his profession should receive immediately the condemnation of his fellows. The true surgeon should be, like Caesar's wife, "above suspicion"; he must be above reproach.

It can be said that the occasion is ripe for the higher development of surgery in America. How long the present Balkanization of Europe is to continue, and how much chaos is to result, no one can tell, but it is certain that the Mexicanization of North America will stop at the Rio Grande. If we have peace, we have also the responsibilities which come with the blessings of peace, and these are to be regarded as held by us in trust for the benefit of the human race.

It is worthy of notice that at the present time when we are in the confusion and welter of war and in the upheaval of traditions, when the foundations of our civilization seem to be shaken, when new philosophies arise to confuse the question of right and wrong, when the power of strength seems to overthrow the sense of the brotherhood of man, when art is trampled upon and force en-

throned, when laws and treaties are disregarded, that the one profession whose value is unquestioned is that of the surgeon. Never was there a time when our art commanded greater respect or deserved it more than at present. It is, therefore, unquestioned that the development of this noble branch of the great science of medicine is a work which deserves the earnest effort of all associations organized for the help of human kind.

It is not simply in the carrying trade or as bankers that we should aspire to leadership. Primacy in the noblest and most humane science and art comes to us now as a duty.

Modern surgery may be said to have begun in France over a hundred years ago through the leadership of a brilliant group of surgeons, who were followed by an illustrious school of British surgeons. Then came the wonderful rise of German surgery, to which we are all such debtors. Are we to remain followers, provincials, notable chiefly for our ability to adopt the example and teaching of others?

In the literature of our art there are names which we all do reverence—Dupuytren, Larrey, Nelaton, Brodie, Paget, Lister, von Langenbeck, Billroth, Volkmann. They were thought-compelling masters who shaped the surgical science of a century.

What names are to be written now upon the open book of the history of surgery? Is there not a page ready for the names of great Americans who will give to the noble art of surgery a luster never known before?

It is the proud function of the American College of Surgeons to aid in the advancement of the higher education in surgery. The American surgeon will never lack skill, energy, nor resourcefulness; to these must be added wisdom.

At Athens, where there has been a number of cases of typhoid fever, the disease is decreasing rapidly. The sanitary authorities have energetically cleaned up the city and urged the citizens to co-operate with them in every way. Beside the smaller fly traps used domestically about one hundred and fifty of the big western fly traps have been distributed about the city, and their effect is promptly visible.

The University of Georgia at Augusta has received from Dr. William J. Young, of Barnwell, S. C., a gift of \$25,000 for the improvement of the library of the college.

CURRENT NEWS.

The Georgia Medical Society has received a gift of 450 bound volumes for its library at Savannah. The donor was Dr. Isaac Minis Hays, of Philadelphia.

The remains of Dr. J. H. King, who died in Atlanta, November 14, were interred in Adairsville.

At Waycross the members of the Ware County Medical Society have arranged to exchange lists of patients who neglect to pay their medical bills. Their agreement will not prevent any worthy but indigent person from receiving all necessary attention.

At Valdosta at a meeting of the Lowndes County Medical Society plans were adopted for the better collection of accounts. It was arranged to employ a paid secretary who shall have access to the books of each member and shall take therefrom a list of all persons who refuse to pay their doctor's bills.

At Macon, November 11, Dr. O. H. Weaver of Macon was elected president of the Sixth District Medical Society. He succeeds Dr. J. M. Anderson of Barnsville.

Drs. P. A. Methvin and J. R. Hutchins, state food inspectors, declare that the markets and grocery stores of Americus are the cleanest and most sanitary they met anywhere.

Dr. W. B. Parks, of Atlanta, died at his home, 53 Forrest avenue, on Monday, November 23. He practiced in Atlanta thirty-three years.

Dr. Emory R. Park, who is in charge of the new vital statistics department, announces that he will put the law into effect on the first of January.

At Macon, November 18, Dr. James T. Ross was elected a member of the Bibb County Board of Health by the grand jury.

The City Council of Atlanta has adopted an ordinance requiring the city physicians to examine all persons who make claims against the city for damages or injuries.

The grand jury of Fulton county (Atlanta) in November returned a number of indictments against dentists and physicians accused of plying their trade without license.

Dr. W. F. Brunner, local health officer of Savannah, reports a decreasing death rate for that city, there being but seventeen white deaths in August. The improvement is ascribed to the general use made by the physicians of the city of the bacteriological bureau.

BOOK REVIEWS.

A Textbook of Diseases of the Nose and Throat—By D. Braden Kyle, A.M., M.D., Professor of Laryngology and Rhinology, Jefferson Medical College, Philadelphia. Fifth edition, thoroughly revised and enlarged. Octavo of 856 pages with 272 illustrations, 27 of them in colors. Philadelphia and London: W. B. Saunders Company, 1914. Cloth, \$4.50 net.

The new (5th) edition of Dr. Kyle's work, just issued, shows an increase of 100 pages and some forty new illustrations. While essentially, by reason of its clarity of statement, logical plan, and unusual literary style, all that a text book should be, it is, moreover, a most comprehensive general treatise on its subject. Both text and illustrations give abundant evidence of painstaking effort in the accumulation of material and its preparation for presentation. The following new articles have been added: Vaccine therapy; lactic bacteriotherapy in atrophic rhinitis; salvarsan in the treatment of syphilis of the upper respiratory tract; sphenopalatine ganglia neuralgia; negative air-pressure in accessory sinns disease; chronic hyperplastic ethmoiditis; congenital insufficiency of the palate; lactic bacteriotherapy in pharyngeal affections, and an article describing the removal of a plate of artificial teeth from the esophagus. The tables of differential diagnosis and the prescriptions are striking points of Dr. Kyle's book—features of particular value to the man in general practice. Intubation and tracheotomy are fully described.

A Manual of Diseases of the Nose, Throat and Ear—By E. B. Gleason, M.D., Professor of Otology in the Medico-Chirurgical College, Philadelphia. Third edition, thoroughly revised. 12mo of 590 pages, 223 illustrations. Philadelphia and London: W. B. Saunders Company, 1914. Cloth, \$2.50 net.

Dr. Gleason's book gives you anatomy, methods of examination, diagnosis, tests, bearing of disease of one organ on the other, and definite treatments. The operations of nose and throat practice are clearly discussed and the best methods advanced. Local anesthesia is given considerable attention. Added is a large formulary.

As a handy volume to have ready reference to for student and practitioner, this work is admirable, written in a brief, yet full, clear style, and containing the very essential features of the subject, without the very often burdensome and contradictory discussions.

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ANONYMOUS CONTRIBUTIONS, whether for publication, for information, or in the way of criticism, are consigned to the wastebasket unread.

NEWS: Our readers are requested to send us items of news of a medical nature, also marked copies of local newspapers containing matters of interest to physicians. We shall be glad to know the name of the sender in every instance.

SPECIAL NOTICE TO MEMBERS.

At the last meeting of the Council a resolution was adopted requiring the Committee on Scientific Work to notify all members, through the Journal, that all papers intended for the next annual meeting must be forwarded to the Secretary at least thirty days prior to the date of the meeting. The reasons actuating the Council were as follows: There are each year a number of papers placed on the program which are not read. It is believed that in some instances men ask for a position on the program with very little intention of reading papers, but merely to have their names on the program. These men who rarely read papers occupy space on the program that could be assigned to men who will read papers.

It is also felt that if a paper has been prepared and sent to the Secretary, the author will be much more inclined to attend the meeting and read his paper than other-

wise. Under the former method a man would agree to read a paper, but would delay its preparation until too late and then would not attend the meeting because he did not have his paper ready. A number of papers read at the last annual meeting were returned to the authors for correction or else were not handed in to the Secretary, and later were lost or in some instances sent to other journals for publication. If the paper is in the hands of the Secretary he is sure at least of having it for publication.

On the whole it is felt that the sending of copies of all papers to the Secretary, before they are placed on the permanent program, will work to the advantage of the conscientious member and also to the Association.

There will be no effort on the part of the committee to criticise or censor any paper, but every one sent in will be placed on the program and it is felt that every author will have an opportunity to read his paper.

It is the wish of the committee that a full program be presented, therefore prepare your papers at once and send them in at the earliest possible moment.

CHATHAM COUNTY SOCIETY.

The annual meeting of the Georgia Medical Society was held on Tuesday, January 12, in the hall of the Society, Savannah, Ga.

Dr. J. L. Jackson, the president, made an address on the progress of the Society.

Dr. Ralph Thomson, popularly known as the poet "Ralph Methven," read some of his own poems on medical subjects.

The following officers were elected for the year 1915:

President—Dr. H. H. McGee.

Vice President—Dr. Jabez Jones.

Secretary-Treasurer—Dr. V. H. Bassett.

Board of Censors—Dr. J. O. Baker, Dr. Walter Wilson, Dr. Lawrence Lee.

Library Committee—Dr. Geo. R. White, Dr. J. A. Crowther, Dr. V. H. Bassett.

Home Committee—President, ex officio; vice president, ex officio; Dr. T. J. Charlton, Dr. W. W. Owens, Dr. W. A. Norton, Dr. A. J. Waring, Dr. Wm. H. Myers.

Delegates to the Medical Association of Georgia—Dr. Walter Norton, Dr. H. W. Hesse.

The Society voted that the annual meeting be held hereafter in December.

FIRST DISTRICT MEDICAL MEETING.

The midwinter meeting of the Medical Society of the First Congressional District will be held at Claxton, Ga., on Wednesday, Feb. 3. The Program Committee desires to secure titles of papers to be presented at this meeting.

Program Committee — Dr. Cleveland Thompson, Millen; Dr. F. F. Floyd, Statesboro; Dr. J. Miller Byne, Waynesboro; Dr. L. A. DeLoach, Glennville; Dr. R. M. Exley, Rincon; Dr. J. T. Maxwell, Savannah.

Dr. H. W. HESSE, President.
CHAS. USHER, M.D., Sec.-Treas.

NEWS NOTES.

The Georgia Surgeons' Club will hold a clinical meeting in Atlanta, February 25 and 26, to which the organized members of the regular profession are invited. Any one desiring a copy of the program of clinics may secure same by applying to the Secretary, Dr. R. M. Harbin, Rome, Ga.

The State Board of Health reports that during 1913 they treated 3,348 cases for the prevention of hydrophobia, with 11 deaths. By giving the treatment free of cost each sufferer was saved the amount formerly charged by private institutions, which was \$140 for each treatment. Counting similar savings in diphtheria, smallpox, tetanus antitoxin, meningitis antitoxin and typhoid vaccine they estimate that they have saved the people of Georgia many hundred thousands of dollars.

A so-called "cancer doctor," who has been operating in the vicinity of Augusta, has just been convicted in the City Court. The new medical practice law is being put into operation in other localities also.

Dr. G. Y. Massenburg, formerly of St. Thomas Hospital, Panama, has located in Macon, with offices in Georgia Life Building. Dr. Massenburg will limit his practice to surgery and gynecology.

William J. Harris, director of the United States census, visited Atlanta late in August to confer with Secretary H. F. Harris, of the State Board of Health, relative to the co-operation of the state and the general government in compiling vital statistics.

An advertisement in The Journal of the Medical Association of Georgia will bring results. Rates sent on request.

POISONOUS FLY DESTROYERS.

The December issue of the Journal of the Michigan State Medical Society calls attention editorially to the danger of using poisonous fly destroyers.

From July 1 to October 15, 1914, forty-five cases of poisoning of young children were reported in the press of a few states and it is pointed out that the symptoms of arsenical poisoning and cholera infantum being very similar, there are possibly many more cases of the kind. It might be well in view of this danger for physicians to eliminate the possibility of arsenical poisoning before diagnosing a case as cholera infantum. A few years ago there was considerable agitation against the use of phosphorous matches, partly because some children were poisoned by eating or sucking heads of the matches. There are doubtless many more cases of the poisoning from the poisonous fly destroyers. Phosphorous matches have been abolished, so should be poisonous fly destroyers.

It seems this danger has already been recognized by the authorities in faraway South Africa and the sale has been forbidden, except by licensed chemists, of certain arsenical fly destroyers, more particularly the tin boxes which have a wick or wicks through which the poisoned water is drawn. The fact that sugar is added to draw the flies makes these boxes especially dangerous to young children; furthermore all these poisonous fly destroyers are usually placed on the window sill and the poisons are thus within their reach.

Both the blotting paper impregnated with arsenic (which is put in an open saucer with water and sugar) or the tin boxes with wicks to draw the poisoned water to the surface, are extensively used and there is probably no poison so commonly and unnecessarily used where it is perforce within the reach of young children as these various arsenical fly destroyers. In country homes, where it often takes some hours to get a physician, and even in our cities among the foreign born, where the parents are, as is well known, slow to call the services of a physician for childish ailments, the danger is especially great. There are as effective and more sanitary ways of killing flies. **Poisonous fly destroyers are an unnecessary evil and should be relegated to the past, like the phosphorous match.**

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VOL. IV.

AUGUSTA, GA., FEBRUARY, 1915

No. 10

Bryan's Principles of Surgery (NEW IDEAS)

While the title of this work is "Principles of Surgery," it really covers elemental teachings vitally concerned with **every branch** of medical practice. It gives the fundamental principles upon which all modern medical practice rests. It gives you facts, accurately and concisely stated, without which no modern medical practitioner can do modern work. It discredits many fallacious ideas, giving you **facts instead**. Dr. Bryan shows you in a most practical way the relations between surgical pathology and the resultant symptomatology, and points out to you the influence such information necessarily has on treatment.

Octavo of 677 pages, with 224 original illustrations. By W. A. BRYAN, M.D., Professor of Surgery and Clinical Surgery, Vanderbilt University, Nashville. Cloth, \$4.00 net.

Niles on Pellagra (SECOND PRINTING)

Before Niles' work was published (and it was **reprinted in five months** after publication), there was no work treating pellagra from the **American** viewpoint. Dr. Niles' book met this need. It is the pioneer American work on the subject, and is the **only** book in any language **adesuately** covering **treatment**—and it **does** cover treatment—every phase of it. Diagnosis is presented in such a clear, clean-cut way that the diagnosis is greatly simplified.

Octavo of 253 pages, illustrated. By GEORGE M. NILES, M.D., Professor of Gastro-Enterology and Therapeutics, Atlanta School of Medicine. Cloth, \$3.00 net.

Deaderick on Malaria (A COMPLETE WORK)

This book is written by a man who sees malaria in all its forms and is, therefore, extremely practical. It describes the third cycle of the malarial parasite—the parthenogenetic cycle; it gives a full account of hemoglobinuric fever; the chapters on diagnosis and treatment are conspicuous for their exactness of statement and the intuitive way in which the author has grasped the needs of the physician and supplied them.

Octavo of 402 pages, illustrated. By WILLIAM H. DEADERICK, M.D., Member American Society of Tropical Medicine; Fellow London Society of Tropical Medicine and Hygiene. Cloth, \$4.50 net.

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THE DOCTOR AND THE MEDICAL SOCIETY.*

By Stewart R. Roberts, M.Sc., M.D., Professor of Medicine, Atlanta Medical College.

One day in ancient times Jupiter suffered with a severe headache, and summoned in consultation all the gods to Olympus in the hope of relief. Their remedies were in vain; even Apollo, the god of medicine, failed to help his distinguished patient. Jupiter, as men nowadays, preferring death to constant pain, ordered his robust son Vulcan to split open his head with an axe. Vulcan, having been thrown out of heaven, or rather kicked out by his father, and fallen through space for twenty-four hours,

“From morn

To noon he fell, from noon to dewy eve,
A summer’s day;”

obeyed all too cheerfully. This was earth’s first great operation and the beginning of surgery. The head was split open and out leaped full grown, in radiant armor, with

high lifted spear and triumphant song—
Minerva, the goddess of wisdom and peace. She was to be the eternal enemy of dullness. The failure of medicine was the beginning of wisdom, and medical men have always been wise men.

Apollo married Coronis, by whom he had one son, Aesculapius, the god of the healing art. Coronis incidentally thinking one lover so delightful, two would be twice as fine, fell in love with another man.

“Flirted with another lover

(So at least the story goes)

And was wont to meet him slyly

Underneath the blushing rose.”

Apollo killed her, and in repentance for his deed instructed his son, Aesculapius, in the healing art. The people soon began to forget Jupiter and worship their physician, and the jealous god killed the clever young doctor and spoiled his medical career. Hygeia, the daughter of Aesculapius, lived to watch over the health of man. Hygiene, sanitation and public health are her posterity.

We have records of about one hundred

* Inaugural Address of President of Fulton County Medical Society, Atlanta, Ga., delivered January 7, 1915.

temples that were raised to Aesculapius. Their chief seats were at Cos, Pergamus and Epidaurus. Near these were founded medical schools, of which those at Cos and Cnidus are best known. Hippocrates was born on the island of Cos, in 460 B. C., of a family of priest-physicians. Through Aristotle, who was a physician and had a medical office in Athens, Galen, the Arabians Rhazes and Avicenna, Vesalius, through Harvey, Willis and Sydenham, the Hypocratic pathology of humors dominated the profession nearly two thousand years. Pagan temples existed to Aesculapius. Hippocrates founded scientific medicine, Galen experimental physiology, Vesalius anatomy, and yet to none of these did the idea of physicians assembling themselves together regularly for fellowship and study ever occur. The idea of the medical society is really new and is the product of scientific medicine since the time of Sydenham and Harvey. The medical Society of London was organized in 1773, 118 years after Harvey's and 89 after Sydenham's death. The Royal College of Physicians of London was organized in the time Henry the Eighth, and the similar college of Edinburgh in 1681. These, however, are exclusive bodies and are hardly to be regarded as medical societies in the modern sense. The Medical Society of Bordeaux, organized in 1798, seems to have been the first society in France. At Palermo, in Italy, a medical academy was founded in 1649, one in Vienna in 1784, and one at Leipzig in 1662.

The physicians in Litchfield County, Connecticut, of which New Haven is the county seat, organized a medical society in 1788, one of the oldest in America. The American Medical Association was not organized until 1847. The State Associations of Missouri, Illinois, and Pennsylvania were organized in 1873, and what is now the Fulton County Medical Society was not organized until 1884. The founder and first president of our Society, Dr. W. S. Elkin, is living and active in our midst. The minutes of the first meeting are as follows:

Atlanta, Ga., April 10, 1884.

The Society met at the office of Dr. Dyar. Meeting called to order by Dr. Parks. Minutes of last meeting read and adopted.

The Committee on Constitution submitted their report, which was adopted. The name of the Society was chosen by ballot and resulted in the selection of "Atlanta Medical and Surgical Union."

On motion of Dr. Elkin the annual dues were fixed at \$1.00 per annum.

Society went into an election of officers, the result of which was as follows:

President—Dr. Elkin.

Vice President—Dr. Wilson.

Secretary and Treasurer—Dr. Dyar.

Board of Censors—Dr. Greer, Chairman, three months term; Dr. Cotter, eight months term; Dr. Avery, one year term.

Dr. Cotter was appointed to open the debate on first Tuesday night in May. The following members paid one-fourth their dues: Dr. Parks, Dr. Quillian, Dr. Cotter, and Dr. Robinson.

On motion the Union adjourned to meet at the office of Dr. Elkin, April 15, 1884.

C. C. QUILLIAN,

Secretary Pro Tem.

Members present: Drs. Elkin, Wilson, Avery, Quillian, Robinson, Greer, Parks, Dyar, Love, Lancaster, Cotter.

At the next meeting, held on April 15th, Dr. Elkin delivered the first inaugural address. The minutes say that "he responded in a very happy manner, urging upon the members the necessity of prompt attendance, taking an active interest in the proceedings, etc." He presented the Society with a large record book and Cushing's Manual of Parliamentary Law.

The next president was Dr. J. D. Wilson, who served during 1885. In 1886 Dr. Virgil O. Hardin was secretary, and the names of Drs. Hunter P. Cooper, Noble, Arch Avery, Dan Howell and F. W. McRae begin to appear frequently in the minutes. The attendance ranged from six to fifteen, and often the minutes are short: "May 17, 1887. No quorum." From an organization in 1884 of ten members, this Society has grown to a membership of 273, and its larger history lies ahead. Most of this growth has come in the last few years, as has the rapid development of the American Medical, the Southern Medical and many other similar associations.

The doctor's life is not only a great life, but it is also a strange life. I doubt if any man living save another doctor understands it or knows the wherefores of his living or being. In only one place do these men assemble together, and that is the Medical Society. It seems interesting therefore to consider the physician's place in the medical society and its place in his life. From the individual's point of view, he needs the

medical society far more than the medical society needs him. Woe unto you physicians is as true as "woe unto you lawyers" if he forsake the fellowship and scholarship of his fellows. For his own sake no man under fifty ought to miss a meeting, and for the sake of the younger men, no man over fifty ought to miss a meeting. His place in the assembly varies with his age and experience, and as a rule the younger the man, the more he carries away from the meetings; the older the man the greater the richness of his experience and the more he brings to the meetings. Graduation gives the medical student the right to continue to associate with his fellows, not the right to leave them and live an isolated life with his patients. The younger man brings to the society the inquiring mind, the desire to learn, to know, ambition, hope; the future is his all in all. He is the quiet listener, too timid as a rule to venture on the uncertain sea of remarks. Timidity in a young man is a rare virtue. Like the meek, he shall inherit the earth in medicine in good time, if he but listen and work and wait. The cock must cut his spurs before his crow is heard very far, and experience is the great background that gives the young man the right and the encouragement to speak. He watches the different men, notes their virtues, the courtesy of this man and the rare knowledge of that one, and if the great society leader Gossip does not inveigle into her coterie, if he escape the newspaper habit, do little novel reading, learn a few medicines well, and his few patients better, he is unconsciously a real member of the healing clan as well as graduate in medicine. System in his reading, regularity in his hours, devotion to his patients, finding out that which he knoweth not, studying his cases rather than just reading medicine, the time will soon come when he feels the inspiration to work up and report his first case. The inspiration is divine. Heeded, writing and public speaking in time will become second nature; neglected, and the next impulse is too easily passed by. To report one case of interest, and every case is interesting, is to learn one disease well, and to teach some member of the society more of medicine. Nowadays there is too much of a tendency to report a series of cases, rather than give patient study to one case. Quantity is the great enemy of quality, and number of knowledge. Better much about one case or one disease rather than little and a

jumble about many. How many of us look back upon our first five years in medicine and wish we might have followed the society as we follow our calls or our office hours. In these early years, to learn to know the physicians of the city, to glean the results of their experience and their specialties, to catch a hint here and a gleam there, is an asset of real value, and the medical society is not to be lightly neglected. The society continues his college work, is really part of his post-graduate work, and best of all, leads him into the paths of those rare spirits whom we call the mature students, who walk in the full light of research and knowledge. He begins to cover the field of medicine and drink its cream, for as a medical student there was much to learn and his teachers talked about so many subjects that the blue milk of knowledge was his portion.

A few years more and our listener of the early years is the active participant in the proceedings. He has reported a few cases, contributed a few papers, presented some clinical cases and now in the full swing of his work, his word is worth more and his presence an inspiration. "The result of experience is experience," and he brings to the discussions the results of his labors. Men of general and special lines meet on common ground in debate and view their subjects from different angles. The general practitioner, the surgeon, the internist, the oculist bring their individual viewpoint, and the sum of these is a scholarly review of the subject. We all need each other. The oculist needs to listen to the family physician and the family physician can gain much from the neurologist or the orthopedic surgeon. The surgeon and the internist are mutual debtors and creditors and their paths are as close as the paths of brothers. The former "walks by sight," and is apt to be more of a man of action, follows the gleam of the scalpel and the click of the artery forceps, and is apt to neglect the more subtle reasoning and methods of diagnosis characteristic of the internist. Surgery has had its period of blood and pus, its period of anesthesia, its period of asepsis and antisepsis, and now it is in the full swing of its period of mechanical procedure. Whatever has been good in these past periods has been brought over to the present, and unless he keeps his mind fallow in the fields of symptoms and differential diagnosis, the surgeon is apt to lose his power to make a diagnosis with the ease and free-

dom from error of his earlier years, and to degenerate into a mere operator, an expert in the mechanics of human tissues. It takes far more than a good scalpel, a certain knowledge of anatomy, and an ostentatious courage to make a good surgeon. Not merely operating, but diagnosis and relief is the real end of surgery as it is of medicine. One of my friends, one of the best operators and students among us, said that he was discouraged about his power to think, he had operated so much and was so absorbed in the mechanical features of medicine that he had almost lost the power to make a diagnosis. And while the surgeon can learn from the internist and the general practitioner, the two last can learn from him. The surgeon is apt to be more progressive, to attend the medical society more regularly, to associate with his fellows more closely in the operating room, to visit clinics and do more post-graduate work, and thus naturally to forge ahead. Unless the physician continues his pathology the surgeon will outrank him in this most important subject, because the latter sees living pathology every day in his operations.

In point of age, the men past fifty are the most valuable members of the society. Whatever be their chosen line of labor, to them is given the retrospect of the years, the vastness of experience, the sorting of facts and the arrangement of relations in symptoms and pathology and treatment. In the attics of their memory are those treasures of experience which we call our mistakes, more precious in value of service and teaching power than many triumphs, real stepping stones to better medicine. Starting in the years when medicine was not what it is today, coming up year by year, buffeted by the storms of disappointment, learning a little here and a little there, clinging to the old Hippocratic doctrine of observation, they have "let knowledge grow from more to more." In the society we need them every hour. In their giving of the richness of their experience in discussion, papers and cases they are making real contributions to the younger men in aiding us all to better keep step with the eternal progress of our art. Too often in the fifties the older men tend to drop out of the society, and begin to run in second speed in their professional interests and relations. But as the young man needs experience, so these older men need to keep their knowledge fresh, their

desire for progress keen, and the constant influx of younger blood stimulates and keeps open their minds. The young man is the whetstone that keeps medicine up to the times and keeps us all out of the ruts. "To continue to observe, to think, to learn—that alone can arouse our sympathy for the life of man; that alone can keep the current of our own life in its course." And though "old age comes on apace," some few of the very old men continue to attend and are interested in medicine even after they have retired from active practice. "Age cannot wither nor custom stale the infinite variety" of the science to which they have given the full measure of devotion of a long life.

Medicine can never be provincial, narrow or Chauvinistic; only the individual in medicine can ever lay hold of these traits. The Brigham Hospital in Boston selects its internes from everywhere, feeling that in this way it can rise above locality and the doctrine of "the one way" or "my way" of doing things. Provincialism is the mother of tradition, and tradition is the enemy of progress, and progress is the handmaid of efficiency. To one faithful in a few things in his home society, destiny opens the way to attend the state associations, the regional and national associations, and one wakes up some bright morning to find himself a citizen of world medicine, going in his vacations and making vacations to go to the clinics and medical Gamaliels of this and other countries. And every time he brings something back home, enriching his own life and that of his fellow physicians. He counts his friends in his own society, the co-laborers of life, and adds in his journeys other choice spirits scattered in many places. His vision widens and his heart opens, the little things of life and the petty worries of practice take a smaller place in his thoughts, the nonessentials increase in number and lessen in importance, and there is no place for sensitiveness, contention or jealousy in his life.

The physician has his place in the society, and owes it obligations. The society has its function and should take a large place in his life. Three qualities should characterize every well organized and well conducted association of medical men—fellowship, friendship, scholarship. The threefold complement of these in the individual member is found in attendance, courtesy, study.

The basis of fellowship is hospitality and welcome. To the newcomer and the recent

graduate the society is his portal of entrance to the larger acquaintance with the profession, and the impression received by him when he first enters the society colors and makes permanent his opinion of men with whom he is to associate for life. In the future their community is his community and their people his people; he enters on the life they have been living and should receive from them the warmest welcome and encouragement. He is not an intruder but an associate; not a competitor but a co-worker in the noblest of callings; not a liability but an asset both to the town and the local profession; not an alien, but rather a friend if given at the start the right hand of fellowship. We are not in competition with each other, rather we should lift our hat and heart in loyal approval to anyone among us who achieves honorable success in the common cause in which we all labor. When a new member is received into the society, he should be present at the next meeting and be formally presented to the members. His admission is an event, and courtesy to the beardless aspirant may be showing kindness to a future Osler or Marion Sims. We once stood in his shoes and with the same ambition, fear and misgivings. Such relations between the older and the younger men promote fellowship among the older men, and the society soon wakes up to the happy knowledge that fellowship is better than jealousy and friendship better than hatred. A new spirit smooths the waters of our professional relations; we be brethren, and our fellow physicians are the finest fellows in the world. Constant fellowship promotes permanent friendship, and friends envy not, are not puffed up, think no evil, and in honor prefer one another. Chilo advised "not to speak evil of the dead," but it is far better not to speak evil of the living. Each one of us, however successful, plays but a little part, and we can give or get nothing so good and lasting as the friendship of our fellow workers, these men of "honor, love, obedience, troops of friends."

No one mind can master the entire field of modern medicine, but every doctor can master one line or one disease, be the authority in his state on that subject and to that extent a scholar in the society. One man knows the pathology of tumors, another is master of the heart, another of the leukemias, another is an authority on gall stones, and each contributes his little to the sum total of knowl-

edge of each member. The study and skill of my friend teaches me my own lack, and I set about refurnishing my medical brain. Study pays the largest dividends of any investment or labor, and every ornament to the profession must spend much time with his cases and his books. One becomes interested in a subject, masters it, and a brief paper makes easy a hitherto clouded field. More important and valuable than the average run of papers is a frequent presentation and discussion of clinical cases. The patients should be on hand and the society should see them. One patient seen is better than many talked about. The discussion and work of the meeting should radiate around these patients rather than the papers alone. Each of us every week sees one or more rare diseases and one of these presented is the very essence of service. In every village and rural community are a multitude of rare and valuable cases usually among the poor, and these people delight to accompany their physician to a meeting. The next half day you spend in a small town, get the local physician to show you a few of the chronic cases, and you will be surprised at the educational value of your afternoon. His community has become a general hospital, and there is material enough to study for a month if one had the time. Case histories should be brief and summarized, the treatment given and discussion invited. Of great value are pathological specimens. Here the surgeon can aid by exhibiting specimens removed at operation with a short description of the case. The post mortem room is the very heart of diagnostic training, the anatomical diagnosis checks the clinical opinion, and frequent exhibition of such specimens is real teaching.

This society has a splendid library and no place to put it or to use it. This condition has lasted for years, and it does seem that the time has come to take a step forward. There is no substitute for a comfortable reading room, with shelves well stocked with old and new books, the best of the journals in all departments, and these bound from year to year. It is a very punctual centrale for medical education and inspiration, a place for study, a haven of information where all can go to clear our heads of mental cobwebs and to reassure us when we waver on the winding path of diagnosis and treatment. In these hard cases that we strain and ache over, it would be a real retreat. Surely with all the progress of our city, our large mem-

bership, the dignity and influence of the profession, before the year is out we can have a working library. We already have the books.

The medical times are changing. Be he old or young, one can read with profit Stuart McGuire's article in the December issue of the Southern Medical Journal on "The Profit and Loss Account in Modern Medicine." Practice has changed in the last twenty years; it will change again in the next ten. The medical society is the lodge of the profession where each of us "still achieving and still pursuing, learns to labor and to wait." We are a part of the world-wide order, co-workers for the human race. "There is a law of equilibrium in the universe in which all contradictories merge," and law of progress in our profession before which all opposition must finally melt and of which we are the beneficiaries. For seventy-five years the physicians and thinkers of Austria and Germany have read and repeated the poem of Feuchtersleben, the Vienna physician, and it is good for us as we enter on another year:

"All things create, observe thou, a poem as
the skies,
The babbling of the foolish, the silence of the
wise.
Know that man's eyes can bear not heaven's
ray undimmed and bright,
That without dreams our waking hours could
reach no full delight.
Be glad of what is given, yet know what thou
dost lack,
Do each hour's nearest duty: halt not and
turn not back.
Let thought not be thy master, in sloth to
hesitate,
A hero he who, falling, fights 'mid the storm
of fate.
Close not thy heart in anger, love on until it
break,
Forget and hope and fear not; remember
and—awake."

The more money The Journal of the Medical Association of Georgia makes out of its advertisements the less it costs the State Association to run the paper. This means that every member of the State Association has an interest in the advertising columns. If one business firm advertises and another does not, patronize the one that does. It is money in your pocket.

TREATMENT OF CEREBRO-SPINAL MENINGITIS BY DRAINAGE OF THE LATERAL VENTRICLE.*

By R. V. Martin, M.D., Savannah, Ga.

The subject of my paper is somewhat misleading. It is my intention to report a case of epidemic cerebro-spinal meningitis treated by puncture and drainage of the lateral ventricle with intra ventricular injection of Flexner's antimeningococcus serum.

The recent epidemic that we have had prompts me to bring this to your attention. A subject of profound interest and importance is its method of spread, something which has not yet been worked out. In the winter and early spring of 1911 there were a number of cases in this city and a careful study at that time evidenced the fact that the disease was confined to no one locality, but cases occurred at the same time in widely different parts of the city, though the majority of them occurred in vicinities where filth predominated.

The disease was observed to attack, as a rule, not more than one of a family, but within a stone's throw of that family other cases in different homes would develop. During this epidemic I knew of no case directly traceable to another, though I have no doubt that many such cases did occur. At the Georgia infirmary where quite a number of cases were sent, no other cases developed there among the nurses, help or patients.

I know of one case treated in the thickly populated Jewish section of the city where isolation could not be relied upon, and numerous friends and sympathizers entered the room from time to time, but, to my surprise, I could trace no case to this one as a source of infection.

I am firmly of the opinion that personal hygiene is a very important factor in warding off the disease. Assuming that the nasal cavity is the avenue of infection, it is our duty to advise all patients in regard to the proper cleansing of these cavities.

The case I desire to report occurred in a colored boy 19 years old, living in Savannah, admitted to the hospital March 23, 1911.

Family History—Unimportant.

Past history is very vague, a laborer, following no particular occupation, had never

*Read at meeting of Medical Association of Georgia, Atlanta, Ga., 1914.

been sick to amount to anything; several years ago had malaria.

Present Illness—Had been sick about a week, sickness started with nausea, vomiting and headache; next morning had high fever, stiffness of neck muscles, Kernig's sign present, but not to any marked degree.

Physical Examination—Body fairly well nourished, stiffness of muscles of neck, Kernig's sign present. No ocular examination made, temperature 101, pulse 100.

The clinical diagnosis of epidemic cerebrospinal meningitis having been made, a spinal puncture followed, and the fluid obtained was found to be purulent. The bacteriologist confirmed the diagnosis and the patient was given an injection of 30 c.c. of Flexner's serum; during the following twenty-two days he was given ten injections of serum and the effect upon the spinal fluid was interesting to note. At times during this treatment the fluid appeared much clearer than at others; this condition existed until about the eighth or ninth injection, when a decided improvement in color and consistency began to appear; however, during all this time the patient steadily lost weight, the rigidity did not improve, the movements of the head became extremely limited and his mental condition decidedly worse, until he finally lapsed into a stupor, answering all questions propounded to him in monosyllables only.

He continued to run a septic temperature from normal to 103, pulse continued quite rapid and all the time he was steadily losing ground despite the fact that his spinal fluid had cleared up. This was his condition on April 14. It was then that I determined to explore one of the lateral ventricles as a last resort and thereby give him the only chance he might have for a recovery.

After observing the usual technique for such operations, an incision was made over Kocher's point, and the skull trephined by means of the Doyen burr. After examining the dura for underlying vessels, an ordinary hollow exploratory needle with stylet was inserted into the second frontal convolution perpendicularly to a depth of about $4\frac{1}{2}$ cm., when the wall was readily punctured, and about 60 c.c. of fluid withdrawn and 30 c.c. of Flexner's serum introduced into the cavity; the needle was then withdrawn and the wound closed without a drain.

The effect of this operation was much greater than I had anticipated. The night following the operation done at 11 o'clock

in the morning, his temperature was 100, pulse 120; the next morning his temperature was subnormal, pulse 96.

The highest recorded temperature after this, as the accompanying chart will show, was 99, his pulse, however, continued rapid; his mental condition began to clear up and the muscular stiffness began to disappear, pulse gradually began to fall, and on May 24 he was dismissed from the hospital, pronounced cured.

It was my intention to present this patient to the Society, but unfortunately he has left the city and I can find no trace of him.

Conclusions drawn from this and other cases treated at this time lead me to believe:

First. That the best results are obtained from those cases treated early with the serum.

Second. That as this serum acts by actual contact with the causative agent, a sufficient quantity should be administered at a dose to get results, bearing in mind all the time Dr. Flexner's advice not to administer more serum into the cavity than the amount of fluid extracted therefrom.

Third. Drain the lateral ventricle as soon as you have determined that spinal puncture is not sufficient to produce a cure, thereby avoiding the probability of such pathological changes taking place in the ventricles as to block the foramen of Monro, the aqueduct of Sylvius or the foramen of Magendie, preventing free communication between the ventricular cavities and the spinal canal.

Fourth. Failure to produce a cure probably results either from an overwhelming amount of toxemia or blocking of these foramina, causing death from cerebral pressure.

At Atlanta a medical research club has been organized to hold its meetings once a month in the building of the University Club. The charter members are Drs. DeLoach, Thrash, Elkin, Manget, Bunce, Beach, Reynolds, Yankey, and Crenshaw.

Dr. Eugene E. Murphey, president of the Augusta Board of Health, went to Providence, R. I., in August to study the methods employed in the municipal contagious disease hospital located in that city with the ultimate intention of improving hospital conditions in Augusta.

EPIDEMIC CEREBRO-SPINAL MENINGITIS FROM A BACTERIOLOGICAL STANDPOINT.*

By K. R. Collins, M.D., Asst. Director Laboratories, and Chief of Antitoxin Dept.,
Georgia State Board of Health,
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In 1887 Weichelbaum described a diplococcus isolated from meningeal exudate that differed from hitherto known organisms of the same type, the relation of this coccus to epidemic cerebrospinal meningitis was suggested later by Jaeger—in spite, however, of these observations there still remained for some years considerable confusion and doubt in the minds of clinicians regarding the etiology and mode of transmission of this much dreaded disease. The fact that it did not always seem actively communicable, though treated in the general wards of hospitals, was misleading, and hence it was with difficulty that the infectious nature of the disease was finally established.

About nine or ten years ago commissions were formed in this country and abroad to investigate the epidemics which were apparently increasing in frequency, and it is the results of these investigations that have led to a clearer understanding of cerebro-spinal meningitis, its cause, transmission and treatment.

The work of Albrecht and Ghon, Councilman, and others established beyond a reasonable doubt the earlier observations of Weichelbaum, and the diplococcus meningitidis is now accepted as the true cause of epidemic cerebro-spinal meningitis.

During an epidemic of this disease that occurred in England about 1905 some observers seemed to think that the organism found in sporadic posterior basilar meningitis differed somewhat in its antibodies from the epidemic cerebral form, but Wollstein, after exhaustive experiments along these lines, reached the conclusion that the organisms were identical and the same serum reacted similarly in both.

It is not unusual to find other bacteria associated with the meningococcus in the spinal fluid. These may be accidental, or secondary, or mixed infection. The latter condition, according to Elsner, is rare. Lingelsheim found a number of different organisms of

the coccal group and some pyogenic bacilli, including the *Pyocyanus* and *Proteus* group.

The meningococcus is found in the nasopharynx (and in a few instances in the throat), from here it either enters direct through the sinuses or, as many now believe, through the blood stream, a general septicæmia existing before the meninges are affected. Solomon, Martin and others found the organism in the blood before any clinical manifestation of the disease occurred.

The meningococcus is generally, though not invariably, found in the spinal fluid upon lumbar puncture. Fischer reports a case where he failed to obtain any fluid upon lumbar puncture, he then went into the lateral ventricle and drew off turbid fluid, in this he found pus cells and the meningococcus.

Fluid should always be examined as promptly after withdrawal as possible on account of the rapidity with which the meningococcus autolyzes. After six hours the organisms may completely disappear.

It must be remembered that a meningitis set up by the tubercle bacillus, the influenza bacillus, the pneumococcus, staphylococcus, streptococcus, and other pyogenic organisms may resemble the epidemic form clinically. The form, however, presenting the most difficulties of diagnosis is that produced by the bacillus of influenza—but this should be determined by the presence of this bacillus in the spinal fluid. The other forms of meningitis are usually secondary, the presence of symptoms peculiar to the primary disease will aid in establishing the etiology, and microscopic examinations will usually eliminate the meningococcus intracellularis as a causative factor.

The mode of transmission is from host to individual, but contrary to the rule followed by many infectious diseases the healthy carrier rather than the patient is more frequently the source of infection. Elser and Huntoon called attention to this fact in 1909, and Bolduan in 1905 traced very definitely the spread of this disease through the mother of children suffering from cerebro-spinal meningitis. Meningococci were found in abundance in the secretion of the nasopharynx of the mother, though she herself never succumbed to the disease.

The viability of the organism is extremely now. It lives only a few hours in direct sunlight and other conditions not favorable to bacterial growth. It apparently disappears

*Read at meeting of Medical Association of Georgia, Atlanta, Ga., 1914.

very rapidly from the nasal cavity and never seems to exist with the same persistency after recovery as the diphtheria bacilli, one to four weeks being the usual time. The period of incubation is not definitely settled, but seems to be anywhere from seven to fourteen days, or even longer.

Just one word regarding the application of the Widal test for the diagnosis of cerebro-spinal meningitis. The meningococci, like other members of the coccal group, vary greatly among themselves in their agglutination, so unless a homologous organism is used in making the test the results cannot be relied upon. Also, some strains are not only non-agglutinable, but do not produce agglutinins for themselves in the animal body. In doubtful cases, however, it might be worth while to make the test, as positive reactions would have considerable bearing upon the diagnosis.

After determining that epidemic cerebro-spinal meningitis was of bacterial origin, the next step was the development of an antitoxic serum for treatment. This was undertaken in many laboratories abroad and by Park and Flexner in this country, but subcutaneous injections were used and the results were not encouraging. Jochman, however, tried intraspinal injections with more striking results. Wassermann subsequently reported on thirty or forty cases treated in the same way, and claimed that there was an apparent effect upon the mortality of the disease. The work of Jochman was followed in this country later by Flexner, who made the serum and experimented upon monkeys first, and then gave it to human beings, using the intraspinal method of injection. The results continued so encouraging that for several years the serum was made and distributed by the Rockefeller Institute, and every effort was made to obtain correct data concerning the effect of this treatment upon the progress of the disease.

At the present time the consensus of opinion is that the mortality of cerebro-spinal meningitis treated by the antitoxic serum is reduced to about 40 per cent.

Green, of Texas, during the recent epidemic in that state, found the mortality of cases not treated with serum to be 72.4 per cent, while in the cases treated the mortality was only 37.9 per cent. The mortality of cases treated outside the hospital was found to be in some instances somewhat higher than those treated in the hospital. Dr. Flexner

kindly sent me several tables, which will be published by him later, giving practically the same results of other observers.

It is not wise to wait for a bacteriological diagnosis in all cases before administration of the serum, but it is advisable to examine the fluid withdrawn at the time of inoculation in order to indicate how to proceed further in the case.

Vaccines.

Vaccination against epidemic cerebro-spinal meningitis has not been resorted to extensively, but Sophian reports that in eleven medical students vaccinated with the meningococcus bacterins, that the blood in all cases showed a high degree of immunity. The same rule regulating the administration of typhoid vaccine would seem to apply in this case. The possibility of a healthy carrier in case of vaccination developing meningitis during the negative phase has been considered, but seems scarcely probable. Indications would point to a development of the disease even if the vaccines were not given. Sophian suggests that in order to lessen the dangers of a possible risk a small initial dose of the bacterin should be given. Vaccination of all persons known to be exposed seems at the present day advisable.

The State Board of Health is now making and distributing the anti-meningitis serum and also the meningococcus bacterins.

The more money The Journal of the Medical Association of Georgia makes out of its advertisements the less it costs the State Association to run the paper. This means that every member of the State Association has an interest in the advertising columns. If one business firm advertises and another does not, patronize the one that does. It is money in your pocket.

At Valdosta the active work of the Board of Health resulted last summer in a marked diminution of fevers and intestinal diseases. A strict inspection by Dr. W. M. Howell of the milk, meat and fish sold in the city has been a decided advantage.

At Columbus, Drs. Merriwether and Williams, who are conducting the public health campaign, examined 1,600 people for hookworm and found 527 cases infected. All were treated one time, 132 received a second treatment, and five a third.

REUNITING THE BRACHIAL PLEXUS.*

By L. C. Fischer, M.D., Atlanta, Ga.

With the kind permission of the President I shall not read the paper the title of which is on the program, but instead shall report a case which I hope will be of greater interest and importance. My subject, as it appears on the program, is, "The Diagnosis of Appendicitis and When to Operate." Instead I wish to make a report of an operation reuniting the brachial plexus.

omohyoid muscle in the posterior occipital triangle, the blade penetrating parallel with the common carotid artery. At the time of receiving the wound, he was seen by Dr. White, who has since explained to me that he had so nearly bled to death at the time of the injury, at which time possibly was cut some of the larger branches of the subclavian artery, or possibly injured the main trunk, that he was unconscious for hours. When stabbed, he fell on his left side, which the doctors thought at the time had resulted in dislocation of the shoulder. Immediately

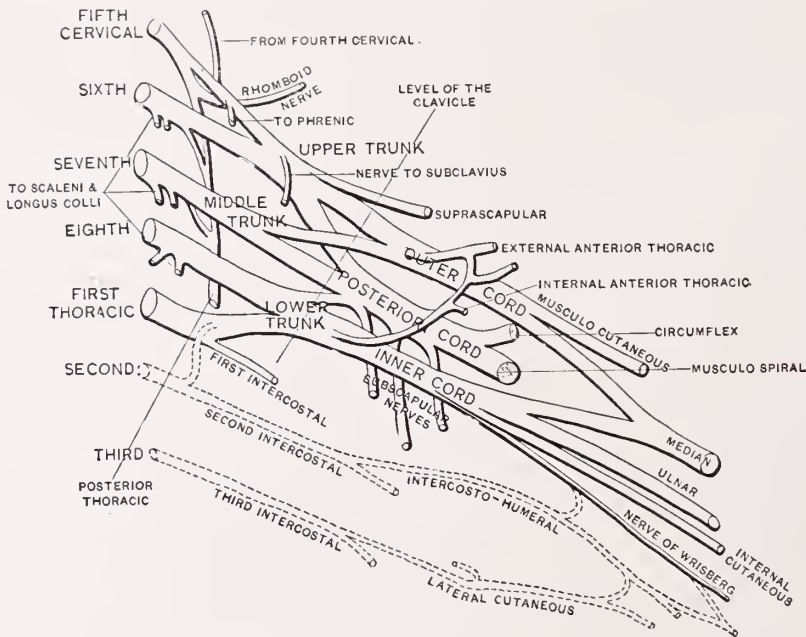


Fig. 759.—Plan of the brachial plexus. (Gerrish.)

CUT No. 1

The case was referred to me by my associate, Dr. E. C. Davis, it having been referred to him by Dr. E. White, of Flovilla, Ga.

The patient was a negro laborer 42 years of age. The history of any previous illness was negative. He denied having had any venereal troubles. The family history was so meagre that no special importance could be attached to it. He was referred to me on account of a complete paralysis of the left upper extremity, and gave the following history:

Ten weeks previous to the time that I saw him (in a fight) he was stabbed in the neck, the knife entering just posterior to the posterior margin of the sterno-mastoid muscle and just above the posterior belly of the

after regaining consciousness, he noticed a complete anesthesia of the entire left extremity. Due to this fact, too, it was supposed that he had received a dislocation, and he was so treated until sent to us.

He was a well developed man, all muscular movements and reactions normal, except the upper left extremity. This hung perfectly flaccid by his side with no power of motion and no sensation except a slight hyperesthesia on the dorsal and palmar surfaces of the little and one-half of the ring, fingers, and that portion of the hand supplied by the ulna nerve. The muscles of this extremity were much atrophied; the skin was cold and clammy, and the whole extremity bathed in cold perspiration. When the hand hung down for any length of time, it became slightly edematous. Upon examination, the shoulder

*Read at meeting of Medical Association of Georgia, Atlanta, Ga., 1914.

joint gave the appearance of dislocation. This was proven not to be true by all of the normal movements and positions being possible without any bony interference. The X-ray pictures, one of the normal and one of the abnormal shoulders, show that the shoulder was not dislocated, but that the left arm was rotated inward and downward due to the paralyzation of all of the muscles controlling this extremity.

After a careful examination, my diagnosis was "a division of the brachial plexus at the time he was stabbed." This was verified by the X-ray showing that the shoulder joint was not dislocated.

He was sent to the Atlanta School of Medicine Hospital for operation. Pulse, temperature and respiration were normal; blood pressure was 120; blood count normal; hemo-

globin 95 per cent; urine contained small amount of blood and pus; both eyes reacted normally to light; heart and lungs negative. There was a complete paralyzation of the arm, forearm and hand, together with the deltoid, pectoralis major and minor, and a portion of the latissimus dorsi muscles, both as to motion and sensation.

The operation was done before my class at the clinic. The incision was made beginning two inches below the lobe of the ear, passing over the middle of the sterno-mastoid muscle, down to the middle of the clavical, dissecting the scaleni muscles apart, retracting the sterno-mastoid together with the nerve, vein and artery, also with a retractor over the subclavian artery, protecting it and the deeper structures, we readily exposed the brachial plexus.

We began our dissection from below upwards, following the plexus from its relation with the subclavian artery until we came to the formation of the trunks. Cut No. 1 shows its formation. We found the two upper trunks and a portion of the lower one completely divided, the distal and proximal ends being about one inch apart, the space filled with cicatricial tissue. Running through the cicatrix was a portion of the lower trunk of the plexus which was not divided, from this comes the ulna nerve which was responsible for the hyperesthesia on the inner side of the hand, as above referred to. The ulna nerve supplies in the forearm only the flexor carpi ulnaris and half of the flexor profundus digitorum, the balance of the anterior muscles being supplied by the median. On the posterior surface the whole group of muscles, together with the supinators, are supplied by the musculo-spiral; the muscles of the arm, especially the anterior group, are supplied by the musculo-cutaneous, the posterior group by the musculo-spiral, the deltoid and muscles around the shoulder being supplied by the circumflex. This accounted for the entire paralysis of the extremity, both as to motion and sensation. It was an easy matter to find and expose the distal ends of the trunks, but was a tedious task to dissect out proximal ends which were found some distance external to the transverse processes of the cervical vertebrae. The atrophy of the distal ends was much more pronounced than the proximal. With the nerves thoroughly exposed, the individual fibers and sheaths were distinctly shown. The ends were cut square across and approximated end to end,



CUT No. 2

using a very small round needle and pagenstecher for suture material. After the nerve fibers were united, a separate row of sutures was taken around each individual trunk, closing the sheath over the nerve, the last row of sutures passing as near as possible only through the sheath to prevent any tension directly on the nerve proper. Great care was taken to isolate each trunk from the surrounding circatrix and normal tissue. After the approximation was completed, the plexus was easily recognized. The wound was closed from within out with No. 1 chromic gut, without drainage, and dressed so that the shoulder and arm were fixed, and that there would be no strain on the neck, the nurse being instructed as to the seriousness of the condition and the harm that might result from tension. Great care was taken to restrain the patient until he was thoroughly conscious, when this condition was explained to him. The healing was by first intention.



CUT No. 3



CUT No. 4

I was surprised, and did not believe it then, neither do I now, but the patient stated that he felt a distinct sensation in his fingers ten days after the operation. I pierced the dressing with a stylet, and whether from seeing me do this or because he actually felt the prick, he complained of pain. The whole extremity was kept securely bandaged for two weeks, changing the dressing only once in this interval.

Four weeks after the operation the patient contended that he had some sensation in the paralyzed arm. In four months he was able to move all of the fingers of his hand and had a grip of surprising strength. He has

reported to me every few weeks since the operation to the present time; he is at work in a lumber camp in South Georgia, where he is able to use the extremity to help in his ordinary work. This is surprising, as nerves are the slowest of all tissues in regeneration.

In the June number of *Murphy's Clinic*, 1912, Dr. Murphy describes a similar operation, and states that "the nerve axons are slow in regenerating and that the time for this to be complete is from ten to eighteen months." The regeneration of the nerves in this case has been to all appearances more rapid than reported by Dr. Murphy. The fact that sensation is complete, and that the patient has some muscular power, makes it positive that the nerves are regenerating and that approximation is correct.

Twelve months after the operation, I saw him when he was able to grasp an axe in his hand, raise the extremity to a level with his body, but could not bring it up over his head. This has gradually improved until, October 24, 1914, when I took pictures of him—which are shown in the accompanying cuts—these showing how completely he has

control of this extremity and of how much service it is to him. In cut No. 2 he is shown holding a bucket of water; in cut No. 3, with an axe in his hand partially raised for a stroke; and in cut No. 4, showing the axe raised up to the highest point that he is able to bring the arm. In each of these is shown the complete control he has of each of the individual muscles, this being shown by the grip on the water pail and the axe handle. The muscles are as well developed as on the opposite side. He has all motion and power of the extremity, except that he is unable to raise it entirely over his head or to get the normal action of the deltoid muscle; and, too, the deltoid is slightly atrophied.

This, after eighteen months, shows that all of the nerves were properly attached except the circumflex. Where the extremity was entirely useless, he has today an arm that is practically as serviceable as a normal one. While it would be a great deal better to reunite severed nerves at the time of the accident, if this is not done then, the patient should be given the advantage of an attempt to reunite the nerves, even after months or years have elapsed.



INJURED SHOULDER



NORMAL SHOULDER (Illustrative Dr. Fischer's Paper)

REPORT OF FUSIFORM BACILLUS AS FOUND IN THE VAGINA.*

By George T. Horne, M.D., Instructor in Gynecology in the Medical Department, University of Georgia, Augusta, Ga.

During the past four years of my service in the out-patient department, I have found only two cases of Vincents spirilla of the vagina. When a patient has been admitted to the gynecological department there is a full and complete history taken. First chief complaint; under this head comes the complaint or illness for which the patient came to the clinic. The cases here reported both gave as their chief complaint pain with mucous purulent discharge from vagina, and shortness of breath, which is irregular in time of appearance.

History of Case.

Age 25 years; married; negro; laundress.

Past History—Menstruation began at 13 years of age, always painful, regular as to

time and amount and duration. Patient at this time is 25 years of age. Six pregnancies, two went to full term, four miscarriages. No accidents attending either miscarriages or full term labors.

Present Illness—Began following birth of first child six years ago, and has grown gradually worse from that time until the present. Denied any history of a venereal infection. No history of child having had sore throat or sore eyes.

Physical examination—Incomplete perineal laceration, mucous purulent vaginal discharge with ulceration of vaginal mucosa and vaginal portion of cervix uteri. Purulent discharge from cervix, thickening of both broad ligaments. Mass in anterior vaginal fornix which upon deep vagina-abdominal palpation proved to be the fundus of the uterus. Other findings negative. The thing that strikes me as being peculiar about this case is that the woman's temperature was normal, pulse normal, and that this condition had been in existence for no one knows how long. From her statement it must have been a long period of time. I can't believe as she states that such a condition could pos-

*Read at meeting of Medical Association of Georgia, Atlanta, Ga., 1914.

sibly exist for so long without her having other complications. She gave no history of ever having had sore throat. Probably she contracted this condition from the nature of her work, as she was a laundress, and could have become infected in consequence of the family wash having been contaminated by some member of the family having Vincent's agina of the tonsil or pharynx.

During my four years' service in the gynecological department of the out-door or dispensary service each patient that comes for treatment showing a vaginal discharge has a smear sent to the clinical laboratory which is in charge of one of the full term members of the faculty. There a most careful and painstaking examination is made of every specimen sent in from the different departments.

Treatment—The vaginal walls were wiped with dry gauze in a most thorough manner, this was followed with a careful and thorough sponging with hydrogen peroxide, a tampon of gauze saturated with peroxide was left in the vagina to be removed the next morning. She was given tincture iodine to use as a douche three times daily, with instructions to put two teaspoonfuls in one-half gallon warm water and to thoroughly irrigate the vagina twice daily while in the recumbent position. Being constipated, she was given two drams sodium phosphate before meals, to be taken with one-half glass of warm water. Patient returned for treatment every third day. The next or second treatment locally was as follows: Vagina wiped thoroughly dry, mucosa appeared very much more normal in appearance, but still ulcerated. I then painted the entire vaginal mucosa as well as the cervix and interior of cervix with full strength tincture iodine, followed by tampon of boro-glycerine and ichthyol and iodine. This treatment was given on each alternate day until March 9, 1914, when smear from vagina showed negative as to fusiform bacillus or vincent's spirilla.

I have only found one other case of this disease affecting the vagina. I have made careful search of the various reports and fail to find any report of this bacillus as inhabiting the vagina. I have been unable to find where a similar case has been reported.

An advertisement in The Journal of the Medical Association of Georgia will bring results. Rates sent on request.

PSYCHIATRY AS A PROBLEM IN MEDICAL COLLEGES.*

By J. W. Mobley, M.D., Georgia State Sanitarium, Milledgeville, Ga.

I come before you today in the interest of a great public issue. A problem so momentous in its grasp and so vital in its application that it has awakened the deep concern of nearly every civic aid association in the United States. I invite your cordial attention to some of the principal problems associated with the mind in both health and disease; and what few thoughts of interest or air I may be able to leave with you, I would like to group under the caption "Psychiatry as a Problem in Medical Colleges." It is not the object of this paper to suggest that psychiatry or mental diseases should be taught in medical schools as a popular attraction to its curriculum, a means of advertisement for pupil attendance. The hope is too full of virtue for such a claim as this, the theme too vital and scientific for mere popular motives. The general practitioner is already burdened with nearly all the fundamental and productive factors underlying special medicine; yet I ask the privilege of adding one more, the most important of them all, the early recognition of abnormal conduct habits—the first and most vital symptom in mental disorders. I do not come, however, to the general practitioner bringing this new care with a feeling of trepidation or apology—his broad shoulders are willing and able to assume this humane and great public health problem. We could trust no one else with it; there is really no one else fit to have it. The specialist would be greatly embarrassed without the advice and judgment of the family physician; the alienist practically handicapped without the family and personal history of the case he has under consideration. To whom do we look for the important factors which create the foundation for reliable diagnosis? To whom do we instinctively turn for information touching this or that peculiarity of a child—as to whether this abnormal conduct is innate or acquired? What would the opinion of an alienist be worth in a given case of imbecility if he were unable to reliably determine the development of a child from infancy? How could he differentiate mental

*Read at meeting of Tenth District Medical Society, Augusta, Ga.

deterioration from developmental defects if a correct insight into the early history of the child were not obtainable? You may approach the subject from every possible viewpoint, but with only one conclusion, viz., that upon the general practitioner rests the responsibility of early psycho-analysis—observing the conditions of developmental defects, peculiar habit traits and deterioration phenomena. Have you ever seen a loving, intelligent mother who was not ready and willing to explain the defects of her child as the result of worms, eating too much candy, digestive disorders, or some immaterial injury or fall? It is practically impossible to get a mother or father to intelligently admit that their son or daughter is a congenital defect. The failure of their child to advance in school is usually attributed to the teacher or some lack of advantage in the child's early life. How many minds not normally adjusted are lost or impaired at this period of development in life. How many active, self-sustaining men and women there might be in the world today if the proper advice and training could be timely applied to the defective group. Would you take a fish out of his natural habitat, keep it in the air one-third of the time and expect it to progress as one in natural environment? The indisposition of a child to go to school and his or her inability to learn readily are early and common indications of faulty adjustment, commanding immediate and competent analysis. Take such a child as this from surroundings that are a constant irritant and embarrassment to his temperamental make-up; put him where the sunshine will reach his soul; feed him on rhetoric that he can easily digest; broaden his vision by simple, attractive handiwork—and from a picture of perpetual mental decay you will generate a new being, capable of self-support and a productive factor in society. The possibility that lies in such an evolution as this should not only promote the progress of mental hygiene, but touch in a broad and vital way the economic principles underlying our government. Let us put our energies together and see if we cannot do something to restore correct habits of conduct—to recultivate a healthy interest in life among those who, by nature, have fallen and must be remodeled. The "skeleton in the closet," once so profound a secret, is now a public health question. The black sheep must be found a con-

genial fold and taught to develop and enjoy the simple faculties God has given him.

We have hardly touched the real issue in the case. Our theme deals with life from the beginning to the end. Man in all of his glory, intellectual development and culture, is capable of suddenly falling from the height of his possibilities. However profound his attainments, he may become a drivelling vegetative organism, evincing the mere glimmerings of a once active intellect. There is no race immune, no age selective—and there is no period in the cycle of man's development or evolution, either before or after birth, that will secure him the gift and preservation of active mental faculties.

The fatalist who once tabooed Mendel's law of heredity and the cultured who fought the public preaching of sex hygiene, have turned their energies in other directions. The cry throughout the world today is for a purer, stronger and better race. We cannot afford to construe the misfortune of the defective and afflicted as "providential conceptions" and offer them only a look of sympathy, or banish them to some isolated asylum where they will eke out an existence and die without the knowledge of ever having lived. Never before has man sought to aid his fellow man as he has today. Aid associations, charity organizations and various other forward movements are putting forth their best efforts to check the propagation of idiots, imbeciles and degenerates.

With such universal interest in the questions of mental hygiene, heredity, insanity and eugenics, the medical profession should feel complimented to know that the public is looking to it for competent help and safe direction. The aid workers are ready on every side. Social service organizations are clamoring for medical recognition and co-operation. We must, then, take such steps as will make us worthy of the call. This can only be done by the systematic teaching of mental diseases, normal and abnormal psychology, in our medical colleges, aided and supplemented by an out-department or clinics for practical demonstrations in psychiatry.

"The Proper Study of Mankind Is Man." The scope of medical science embraces a knowledge of the human race; the reaction of the mental and physical life, both in health and disease. The great English philosopher, Herbert Spencer, has defined life as "the continuous adjustment of in-

ternal relations to external relations." We live and comply with the laws of nature and civil adjustment, because the forces in our bodies accord and are in harmony with the forces outside of our bodies—that is, physical and mental adjustment to our environment. It is just as important then for the general practitioner, the specialist—indeed, the entire medical profession—to be able to recognize abnormal mental reaction states as indicated through faulty adjustment to surroundings, as to be able to discern objective and subjective symptoms in physical diagnosis.

It is manifestly more important that the medical man be able to analyze the early symptoms of mental diseases than to waste his time in mastering some theory in physiological chemistry that will never be of any practical service to himself or the public. It would be well nigh impossible to estimate the value accruing to society and our commonwealth, if just one criminal might be diverted in his tendencies and saved from a life of crime and expense to the commonwealth. It will be too late to help him by attempting to remodel his mind and correct his adjustment after he is qualified as an active and vicious unit in society.

The public in its ignorance and clamor for "civil and religious righteousness" do not deal altogether justly with the constitutionally inferior. They never stop to wonder if this culprit, imbecile or nature freak ever possessed such moral faculties as to make him a law-abiding citizen. Indeed, it may be said that they have never known that the ordinary criminal degenerate or constitutional psychopath is not only not guilty of the misuse of a virtuous talent, but this class do not actually possess the natural endowments for normal citizenship. Why is it that your old horse at home is not a race horse? Is it because he has a contempt for the qualities of the fleet-footed? This homely illustration aptly sets forth the contentions and objects of this paper. The students of anthropology and religious skeptics are yet contending over man's real place in nature. Let us drop this side of the question and endeavor to determine man's adequate situation in life.

For practical purposes, let us regard life as the harmonious adjustment of every possible external and internal condition, the satisfaction of every biological principle. This is a beautiful theory, truly—a divine

conception. But somewhere and at some time and for some reason, there got into this stable mixture discordant elements that have brought—as a result—disease, insanity and psychological phenomena.

The advent of abnormal physical conditions have made possible the establishment of our great medical universities. Insanity and crime have brought our state hospitals and jails. Through the latter institutions, we have provided a means of custodial care and civil regulation. We must go further than this; we must reverse the proposition and offer to this class early means of diagnosis and scientific treatment.

This can best be done by establishing in our medical colleges the chair of psychiatry, where didactic lectures may be given on the fundamental principles of defective makeup—where we may learn to study the disorders of behavior. We have just now come to the practical phase of this question; the issue as it appeals to us in its clinical aspect, the problem as it applies to society as a public health question. It does not accomplish any real good to read such papers as this before popular gatherings, if that is the end of the effort.

We might proclaim the horrors of smallpox and the blessings of preventive medicine throughout the land with little avail, if vaccination and isolation were not enforceable by law. The saving of a human life is a great accomplishment, and the surgeon is entitled to a justifiable self-esteem when he meets the emergencies of strangulated hernia or fulminating appendicitis. To no less degree should he be honored who successfully copes with the pathological problem of the mind and the metaphysical and physiological factors associated with abnormal adolescence. The time is coming when the bachelor and master degrees of our universities will require a proficient knowledge in the science of medicine and psychiatry, just as today there is a demand for higher scholastic attainment in our medical colleges.

The unsoundness of mind is a national handicap. Mental disorders are among the most obscure diseases to which man is subject. It is hard at best to obtain an intelligent insight into the science of psychiatry by systematic and careful training. What, then, may we hope to accomplish if our interest and methods of instruction in mental diseases are only haphazard? Many of the attacks of manic depressive psychosis may be

averted or modified if the family physician could recognize and properly appreciate the onset symptoms of insanity—as they appear through slight changes in disposition, loss of appetite and inability to sleep. The slightest depression or elevation of spirits, the most trivial domestic irregularity and slight changes in the stream of mental reaction or mode of expression being the early manifestation of a six months period of mental excitement or depression.

The comprehension of complex controls and subconscious memory states in hysteria, the obsessions and doubts of psychiasthenia and change in feelings in neurasthenia, should be well grounded in the minds of physicians to properly detect and manage these cases in their very beginning.

The only practical way to meet the needs of psychiatry in its relation to the public welfare, is to establish in connection with regular instruction in mental diseases in medical colleges, psychopathic hospitals and clinics at different points in the state, these hospitals to serve as detention wards for early study and diagnosis. The expense of committing each patient from the county by ordinary jury trial would be almost sufficient to maintain them in these psychopathic hospitals, where they could be detained during the first ten days and afterwards, if necessary, committed to the detention wards of the state hospitals for the insane by a corps of competent alienists.

It would be much easier also to obtain the consent of families to send them here temporarily, where the formal and embarrassing procedure of jury trial was dispensed with. The state would be protected from illegal commitments, and relieved from the care and expense of those who might otherwise become wards of the state for many years.

I do not mean to say that the general practitioner must necessarily be a highly trained psychiatrist to do effective work in this great field of preventive medicine. But it is essential that he be familiar with the early symptoms of mental disorders, and that he recognize the vast importance of the subject and be in a position to direct his patients to a competent alienist for proper examination and diagnosis.

It is not customary in general medicine to apply the Widal test when our patient is delirious in the last stages of typhoid fever or turn to bacteriological examination when our patient is choking from diphtheritic

deposits in the throat; but—shame be it said—this is true in a large majority of cases of mental and nervous diseases, the ordinary jury making the diagnosis and committing the sufferer to some jail or asylum in order to protect the public.

Is it not appalling to think that in our civilized land men of culture may continue insane for years—squandering their estates, making illegal wills—and attention not be directed to their condition until they have committed some crime or disgraced themselves and family by some indecency of personal conduct.

In the year 1911, 627 patients died of paresis in the state of New York alone, a percentage higher than the deaths occurring from typhoid fever, erysipelas, dysentery or malaria. And yet paresis is caused by syphilis—is a preventable and curable disease during the stage of its existence as syphilis and before parietic symptoms begin.

Just as appalling are the figures relative to alcohol and alcoholic insanity. This high percentage of paresis, alcoholic insanity and other forms of mental deterioration which fill our hospital records year after year, only indicate to a degree the actual damage done to the minds of our people; for many feeble-minded and other defective and nervous states arise as a consequence of syphilitic and alcoholic parents, whose history and condition are never known or recorded.

A more careful study into statistical data with reference to insanity or mental unsoundness, clearly indicates the great demand for a more comprehensive knowledge among general practitioners of the principles of psychiatry. To quote from the New York State Hospital Commission in its annual report for 1911, we find that 30 per cent of all men entering its hospitals for the insane, and 10 per cent of all women, were suffering from conditions induced either directly or indirectly from the use of alcohol. In the surgeon general's report of the navy for the fiscal year 1912, we find 343 men and officers were retired or discharged from service on account of mental disorders. In Greater New York about 500 people died from typhoid fever in 1912. From the same population in the same year, there was a higher per cent of paresis recorded, all of whom were destined to die of their malady in a reasonably short time. Dr. Thomas W. Salmon cites the case of a young bank cashier whose ability and business integrity was beyond reproach.

Yet he wasted the funds intrusted to his keeping while suffering from the early stages of paresis. He was soon afterwards convicted of embezzlement and died while a convict as an insane parietic. No doubt every alienist of experience can recall similar cases that have come under his observation.

The writer has known the stuporous stage of dementia praecox to be diagnosed as organic brain disease where surgical intervention was advised.

The widespread interest manifested in general psychopathic clinics and mental hygiene conferences throughout the country only indicate the importance of popular education in psychiatry. The Georgia State Sanitarium stands ready to aid in the promotion of this great problem. Will the medical colleges of the South join in the inauguration of this very important question?

THIRD REGULAR CLINICAL MEETING OF GEORGIA SURGEONS' CLUB.

Atlanta, Georgia, February 25 and 26, 1915.
Headquarters, Hotel Ansley.

Officers.

President—E. C. Davis, M.D., Atlanta.

Vice President—T. J. McArthur, M.D., Cordele.

Secretary and Treasurer—R. M. Harbin, M.D., Rome.

Executive Committee—W. S. Goldsmith, M.D., Atlanta; G. R. White, M.D., Savannah; W. W. Battey, Jr., M.D., Augusta.

Committee on Arrangements—Willis Jones, M.D., Atlanta, Chairman; E. G. Balenger, M.D., Atlanta; S. T. Barnett, M.D., Atlanta; Michael Hoke, M.D., Atlanta; F. P. Calhoun, M.D., Atlanta; W. S. Goldsmith, M.D., Atlanta.

Thursday, February 25.

9 A. M.—Grady Hospital, Surgical Clinic—Dr. J. N. Ellis.

9 A. M.—Davis-Fischer Sanatorium, Surgical Clinic—Dr. L. C. Fischer.

10 A. M.—Atlanta Medical College, Surgical Clinic—Dr. J. L. Campbell.

11 A. M.—Wesley Memorial Hospital, Surgical Clinic—Dr. E. G. Jones.

11 A. M.—Atlanta Medical College, Genito Urinary Clinic—Dr. W. B. Emery.

12 M.—Office 315 Grant Building, Irrigation and Drainage of Seminal Ducts and Vesicles through Vas Deferens—Dr. W. L. Champion.

12 M.—Atlanta Medical College, Genito Urinary Clinic—Dr. A. L. Fowler.

2 P. M.—Georgia Baptist Hospital, Gynecological Clinic—Dr. M. F. Benson.

2 P. M.—Grady Hospital, Gynecological Clinic—Dr. S. T. Barnett.

2 P. M.—Piedmont Sanatorium, Surgical Clinic—Dr. F. W. McRae.

4 P. M.—Grady Hospital, Orthopedic Clinic—Drs. Hoke and Hodgson.

Surgical Specialties.

2 P. M.—Wesley Memorial Hospital, Eye, Ear, Nose and Throat Clinic—Dr. H. M. Lokey.

3 P. M.—Grady Hospital, Eye, Ear, Nose and Throat Clinic, Dr. F. P. Calhoun.

Thursday Evening, February 25.

7:30 P. M.—Subscription Dinner, Hotel Ansley Banquet Hall.

Seats for the dinner and symposium will be guaranteed by the management only to those filing their names in advance with the hotel clerk. Past experience has proven the necessity of this rule.

Short Business Meeting.

Symposium, "Surgical Indigestion."

Banquet Hall, 9 P. M.

Definition—Dr. E. G. Jones, Atlanta.

Etiology—Stomach and Small Intestines—Dr. W. B. Hardman, Commerce, Ga.

Colon and Appendix—Dr. J. D. Chason, Bainbridge, Ga.

Gall Bladder and Ducts—Dr. A. J. Mooney, Statesboro, Ga.

Pathology: Stomach and Small Intestines—Dr. W. W. Battey, Jr., Augusta, Ga.

Colon and Appendix—Dr. F. W. McRae, Atlanta, Ga.

Gall Bladder and Ducts—Dr. H. S. Munroe, Columbus, Ga.

Symptomatology: Stomach and Small Intes-

tines—Dr. R. M. Harbin, Rome, Ga.

Colon and Appendix—Dr. T. J. McArthur, Cordele, Ga.

Gall Bladder and Ducts—Dr. R. P. Glenn, Athens, Ga.

Diagnosis: Stomach and Small Intestines—Dr. H. J. Williams, Macon, Ga.

Colon and Appendix—Dr. G. H. Noble, Atlanta, Ga.

Gall Bladder and Ducts—Dr. W. P. Nicholson, Atlanta, Ga.

Demonstration of Radiographs—Dr. J. S. Derr, Atlanta, Ga.

Treatment: Stomach and Small Intestines—Dr. W. F. Westmoreland, Atlanta, Ga.

Colon and Appendix—Dr. W. S. Goldsmith, Atlanta, Ga.

Gall Bladder and Ducts—Dr. C. C. Harrold, Macon, Ga.

Friday, February 26.

9 A. M.—Grady Hospital, Surgical Clinic—Dr. Willis Jones.

10 A. M.—Grady Hospital—Surgical Clinic—Dr. W. S. Goldsmith.

11 A. M.—Atlanta Medical College, Surgical Clinic—Dr. W. F. Westmoreland.

12 M.—Grady Hospital, Surgical Clinic—Dr. F. K. Boland.

12 M.—Atlanta Medical College, Dermatological Clinic—Dr. M. B. Hutchins.

12 M.—Office Candler Building, Cystoscopic Demonstration—Drs. Boyd and Shallenberger.

2 P. M.—Grady Hospital, Gynecological Clinic—Dr. G. H. Noble.

2 P. M.—Wesley Memorial Hospital, Genito-Urinary Clinic—Dr. E. G. Ballenger.

2 P. M.—Georgia Baptist Hospital, Gynecological Clinic—Dr. R. R. Kime.

3 P. M.—Atlanta Medical College, Gynecological Clinic—Drs. E. C. Davis and O. H. Matthews.

3 P. M.—Federal Prison, Cystoscopic and Urethral Catheterization—Dr. J. Calvin Weaver.

4 P. M.—St. Joseph's Infirmary, Surgical Clinic—Dr. W. P. Nicholson.

Surgical Specialties.

12 M.—Office Candler Building, Demonstration to check and reduce the progress of acquired myopia—Dr. A. G. Hobbs.

2 P. M.—St. Joseph's Infirmary, Eye, Ear, Nose and Throat Clinic—Dr. Dunbar Roy.

3 P. M.—Grady Hospital, Eye, Ear, Nose and Throat Clinic—Dr. R. B. Ridley, Jr.

ATLANTA ROENTGEN RAY SOCIETY.

Stated meeting of Atlanta Roentgen Ray Society. Presiding, Dr. George M. Niles. The meeting was held at the office of Dr. John S. Derr.

After routine business was completed, the program was filled by Montford Morrison, M.A., M.S., a physicist of Atlanta, who lectured on the fundamental physics of the Roentgen rays. His remarks brought forth a general discussion.

Incidentally, in discussing the physiologic chemistry of metal poisoning, Mr. Morrison recommended as an antidote the energetic local application of the inner surface of orange peel for several successive nights.

Next on the program was a paper, "Present Status of Dental Roentgenology," by S. L. Silverman, D.D.S. In this Dr. Silverman endeavored to show the many diagnostic aids afforded in obscure nervous and toxic manifestations by the skillful and judicious employment of this agency.

Dr. Silverman's paper was freely and favorably discussed.

After this, the Society repaired to the laboratory of Dr. Derr, where Roentgenograms illustrative of various conditions were presented and discussed.

B. E. SALE, Secretary.

The more money The Journal of the Medical Association of Georgia makes out of its advertisements the less it costs the State Association to run the paper. This means that every member of the State Association has an interest in the advertising columns. If one business firm advertises and another does not, patronize the one that does. It is money in your pocket.

An advertisement in The Journal of the Medical Association of Georgia will bring results. Rates sent on request.

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OF THE

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Advertising forms go to press eight day in advance of the date of issue. In sending in copy time must be allowed for setting up advertisements and for sending proofs. No proprietary medicines can be advertised until approved by the council. Advertising rates will be sent on request.

CONTRIBUTIONS

EXCLUSIVE PUBLICATION: Articles are accepted for publication on condition that they are contributed solely to this journal.

CONTRIBUTIONS TYPEWRITTEN: Authors should have their contributions typewritten—double-space and with ample margin—before submitting them. The expense is small to the author—the satisfaction is great to the editor and printer. We cannot promise to return unused manuscript, but try to do so in every instance. Manuscript should not be rolled or folded.

ANONYMOUS CONTRIBUTIONS, whether for publication, for information, or in the way of criticism, are consigned to the wastebasket unread.

NEWS: Our readers are requested to send us items of news of a medical nature, also marked copies of local newspapers containing matters of interest to physicians. We shall be glad to know the name of the sender in every instance.

AN APPEAL TO THE COUNCIL AND MEMBERS OF THE MEDICAL ASSOCIATION OF GEORGIA.

We are now entering upon a year that is fraught with great possibilities and also with grave responsibilities.

The Association is in better shape than ever before. The membership is the greatest within our history.

The Journal is now self supporting from the "ads" we are carrying, and will during this year become a valuable asset. It is hoped that we will be able to put on at the coming annual meeting a medical defense feature for all members of the Association, without cost, although through the ordinary channels it would cost each member fifteen dollars per year.

All desirable legislation has become effective and every member should feel proud of the great progress we have made in every respect, but it is necessary that every coun-

cillor, every officer of a local society and every member of the Association should put his shoulder to the wheel in order that we may maintain our present standing, and if possible acquire a better one.

The financial condition of the profession in the state in consequence of the low price of cotton, which is our chief commodity, is bad, and we fear there will be a "slump" in our membership. If such should be the case, many of our well thought out plans may have to be deferred for an infinite time.

Our Secretary, Dr. Lyle, has worked hard and zealously to build up the advertising contracts in our Journal, which are largely dependent upon circulation, and unless our membership is maintained, we cannot expect to maintain our present income from this source. Considerable expense will be entailed in putting on the medical defense feature, and the membership fees will be needed.

It is necessary that every county keep up its society to the maximum; it therefore becomes necessary that every councillor keep informed concerning the situation in his district, and see that the county officers do their full duty.

I wonder how many councillors have written to each county in their districts this year. Have you?

I even wonder if the councilors know how many counties in their districts have societies.

It is the duty of each councillor to keep informed about his district and see that all organizations are kept up and new ones formed where necessary. A little work and correspondence now will be of great assistance to the Association during the year. Any councillor who is not willing to make such an effort is not doing his duty as expected of him and he should either perform this full duty willingly or else make way for someone who will.

I am informed that practically no dues for this year have been received, and yet sixty of the ninety days allowed have passed.

Gentlemen, will you permit such a situation to continue? I trust not, and am asking that you immediately take up these matters with each county.

It means only a few hours' work for each of you, but it means a great deal for the Association whose officers you are, and the Association will hold each and every one

of us responsible if we fail in the performance of our duties.

Let me make a final appeal to every one to get busy and let us have an Association second to none.

Yours for the Medical Association of Georgia,

J. LAWTON HIERS, Chairman.

MEMBERSHIP CARDS.

Those who have paid their dues for 1915 should have received membership cards, similar to those given by the American Medical Association and many of the other state associations. We trust that any member who has not received such a card within a reasonable time following the payment of his dues, will interrogate his secretary concerning the reason, and if the secretary has sent his dues in to the state secretary, then both of them get after the state secretary, for there is a mistake somewhere. This card is not particularly a thing of beauty, but it is an evidence of a member's good faith toward his fellow physicians and organized medicine in general, and should serve to put him in touch with the best medical men wherever he may go. It will expedite matters considerably in registering at the annual session of the State Association. It is hoped that the custom of distributing membership cards will serve to make less likely the failure of a member to immediately secure the advantages of membership, following the payment of his dues, no matter where the fault may lie.

NATIONAL CONFERENCE OF CHARITIES AND CORRECTION PROGRAM ANNOUNCED.

Announcement has been made from the office of the National Conference of Charities and Correction of the preliminary program of its forty-second annual meeting, to be held at Baltimore, Md., May 12th to 19th.

The president of the conference, Mrs. John M. Glenn of New York, anticipates that this will be one of the largest gatherings of charity workers in the United States this year, on account of the widespread destitution and the demand for methods of relief and social amelioration that will be adequate for these unprecedented conditions. The conference consists of public officials, residents of social settlements, heads of institu-

tions, penologists, delegates from colleges, universities, churches and women's clubs, and others interested in this field.

One of the most important discussions thus far planned will be opened by Prof. Charles R. Henderson of the University of Chicago, who will present a report on "Outdoor Relief in the United States, with the Consideration of Some of the Lessons to Be Drawn from European Experiences." Dr. Edward T. Devine of Columbia university, who recently has accepted a deputy commissionership in the Department of Charities of New York City for the supervision of an investigation of private charitable institutions, will discuss "The Policy of Granting State Subsidies to Private Charities." This division of the program under the chairmanship of George S. Wilson of the Board of Charities of the District of Columbia will emphasize the increasing magnitude of public charity and the need of effective co-operation of public officials and private agencies.

The treatment of this field will be supplemented by a study of "The Family and the Community," under the chairmanship of Riley M. Little, secretary of the Philadelphia Society for Organizing Charity, and a large group representing the voluntary charity associations of the larger cities. One of the leading papers will be by Miss Mary E. Richmond of the Russell Sage Foundation, on the importance of case work.

Supplementing and summarizing the accounts that have been issued during the year of measures to combat unemployment, Prof. Henry R. Seager in the section on social legislation will treat the causes and remedies of this evil, and other speakers will explain and criticize the work of employment offices. In this division also will occur a treatment of "Shifting of Taxation to Land as a Means of Relieving Congestion and Poverty," by Frederick C. Leubuscher, president of the Lower Rents Society of New York.

There has been an enormous increase in the last few years of charity workers and others generally known as social workers in the United States, both in professional employment and rendering voluntary service. A unique discussion, therefore, is likely to occur under the committee on education for social work, of which Porter R. Lee of the New York School of Philanthropy is chairman. An attempt will be made to define the requirements and standards of this new pro-

fession by such speakers as Jeffrey R. Brackett of Boston, Miss Edith Abbott and Dr. Graham Taylor of Chicago, and Prof. Devine of New York.

The field of health and hygiene is comprehended in a series of discussions on health topics, under the chairmanship of Dr. Richard C. Cabot of Boston, and of social hygiene under the chairmanship of Mrs. Martha P. Falconer, superintendent of the State School for Girls at Darling, Pa. Dr. Cabot's program will include an explanation of the newer methods of hospitals in their social service departments, and a symposium on the social education of the physician by Joseph Lee of Boston, and Dr. Charles P. Emerson, dean of the medical department of Indiana University, Indianapolis. Mrs. Falconer's program will be addressed to the question, "How Shall We Suppress Prostitution?" this following previous considerations at the national conference of the extent of our scientific knowledge of this subject and the proper use of popular educational methods. Dr. Katherine Bement Davis, commissioner of correction of New York City, will give "A Survey of Educational Work," and other speakers will treat subjects such as protective league work, prostitution in rural communities, and methods of scientific investigation.

A series of discussions of great significance from an educational as well as social standpoint, will occur in the division on "Children," under the chairmanship of C. C. Carstens, secretary of the Massachusetts Society for the Prevention of Cruelty to Children, which will include not only the treatment of neglect and dependency among children, but also a consideration of "The Reaction of Children's Case Work in the Development of the Constructive and Preventive Work of a Community." One of the leading discussions in the field of corrections will pertain to the popular question of payment of wages to prisoners. Dr. Irwin H. Neff, superintendent of the Foxborough State Hospital in Massachusetts, and Dr. G. Linthicum of Baltimore will speak on "The Treatment of Intemperance and Its Relation to Crime."

The remaining section on the state care of insane, feeble-minded and epileptic, under the chairmanship of Dr. Walter E. Fernald, superintendent of the Massachusetts School for the Feeble-minded at Waverly, includes as speakers among others: Dr. Adolf Meyer of Johns Hopkins University, Baltimore;

Bleecker Van Wagenen of New York; Dr. C. B. Davenport of the Eugenics Laboratory at Cold Springs Harbor, New York; Dr. H. H. Goddard of Vineland, N. J., and Dr. Martin W. Barr, superintendent of the Pennsylvania School for the Feeble-minded at Elwyn.

The Conference sermon will be preached by Dr. W. Russell Bowie, rector of St. Paul's church, Richmond, Va.

NEW YORK'S PATENT-MEDICINE BOMB

That New York City, acting through its Department of Health, has just dropped a bomb into the midst of the fake-medicine manufacturers is asserted by George Creel, writing in Harper's Weekly (New York) on "Poisoners of Public Health." Mr. Creel begins by asserting that the national Food and Drugs Act of 1906 "has had its teeth drawn, one by one, until now it has about as much bite as a Canton-flannel dog." This has been done, we are told, by successive decisions and acts of the administrative authorities until finally the Supreme Court has given the last stroke by its decision that the Food and Drugs Act does not apply to state-ments, false or otherwise, regarding the curative effects of medicinal preparations, but governs only misstatements regarding composition or place of manufacture. Writes Mr. Creel:

"In plain words, nothing can be done to the baby-soothing-sirup fakers for selling their mixture of morphin and alcohol to ignorant mothers and careless nurses unless they lie about the amount of alcohol or morphin, or suppress the true place of manufacture. With all due respect to the high tribunal of the land, this decision must be regarded as a first aid to fraud and murder."

In fact, Mr. Creel charges what protection we are now getting against fraudulent medicine-sharps is largely through other channels than the Act. For instance, the postoffice department, by denying the use of the mails through the issuance of fraud orders, "has done away with a number of notorious scoundrels who had been preying on the wretched for years." City boards of health may do much, as is shown by the example of New York, thus cited by Mr. Creel:

"In New York, Dr. S. S. Goldwater has discovered a simple and effective means of attacking the patent-medicine poisoners. This

is the order which he has devised and which has all the binding effect of a law:

"No proprietary or patent medicine, manufactured, prepared, or intended for internal human use, shall be held, offered for sale, sold, or given away, in the City of New York, until the following requirements shall, in each instance, have been met.

"The names of the ingredients of every such medicine shall be registered in the Department of Health in such manner as the regulations of the Department of Health may prescribe.

"The expression 'proprietary or patent medicine,' for the purposes of this section, shall be taken to mean and include every medicine or medicinal compound manufactured, prepared, or intended, for internal human use, the name, composition, or definition of which is not to be found in the United States Pharmacopeia or National Formulary, or which does not bear the name of each ingredient conspicuously, clearly, and legibly set forth, in English, on the outside of each bottle, box, or package, in which the said medicine or medicinal compound is held, offered for sale, sold, or given away.

"The provisions of this section shall not, however, apply to any medicine or medicinal compound sold or given away upon the written prescription of a duly licensed physician, provided that such medicine or medicinal compound be sold or given away to or for the use of the person for whom it shall have been prescribed and provided; also, that the said prescription shall have been filed at the establishment or place where such medicine or medicinal compound is sold or given away, in chronological order according to the date of the receipt of such prescription at such establishment or place.

"Every such prescription shall remain so filed for a period of five years."

"Innocent enough, seemingly, and yet were lyddite dropped in their midst it could not create more terror in the patent medicine camp than that order. To explain, all patent medicines must register their formulas in the Department of Health unless the manufacturers set forth the contents in plain English on each package.

"Now the Department of Health operates a very efficient bureau of chemistry. When formulas are registered Dr. Goldwater's chemist will look them over to see just what they are and what they are good for. If formulas are not registered, but contents set

forth on the labels, the chemists will have such packages purchased and subjected to the same tests as the formulas. In either event, fraud can be determined, and the Department of Health has all necessary power to order arrest and command prosecution.

"What Dr. Goldwater has done can be copied by the health commissioner in any city with an equal amount of public spirit and moral courage.

"It may be urged that the smaller communities cannot afford to maintain a department of chemistry. In such case, the health commissioner will need only to write to Dr. Goldwater, to the United States Department of Public Health in Washington, or to the Council of Pharmacy and Chemistry of the American Medical Association in Chicago, and full reports on every patent medicine will be forthcoming.

"This, then, is the task of the cities. It is, of course, a somewhat involved and very tedious attack, but it will serve while public opinion is at work on Congress.—The Literary Digest.

A SENTIMENT.

To Those Who Enter Here.—If you are ill, what skill I may possess is yours. If, through poverty, you can reward my efforts only with gratitude, that is pay enough. If you wish to unburden your heart of private griefs, your story shall fall upon sympathetic ears and unrevealing lips. If there be aught of advice or admonition that my training or study can supply, it is freely yours.

But if you enter here to sell me bonds, books, drugs or gold mines; if your mission be to add to my knowledge by educating me in the use of nauseating sample drugs which will only gather dust in an out-of-the-way corner; if, in your solicitation for my welfare, you come to appoint me medical examiner (providing I buy stock) in an insurance company which I know not of; if you would beg dimes for drink, either openly or under the cloak of distress; in short, if you would exploit me for your own financial gain or attempt to prey upon the well-known charity of my profession, then you will find the heart that would serve is a heart of stone, and that you but waste your time and mine.—Bulletin, Blair County (Pa.) Medical Society.

Does your eard appear in the Professional Directory?

The greatest boon to the automobile owners has just been given them recently in the form of a tire constructed of double the thickness of other standard makes. This added thickness in wearing surfaces makes the tires the best on the market today for real service as they are puncture-proof and withstand great wear and hard service. Notwithstanding the many added features of these tires they are being sold now as an introductory offer at a price about 40 per cent lower than the regular price of standard tires. These tires bear a 7,000-mile guarantee which is also double that of the regular made standard goods. These tires are advertised in this issue.

All dues are now payable. Those not paid by March 30th will witness the removal of the delinquent's name from the membership rolls of our organization. Please send your check to your County Secretary now.

The value of your local organization will be in proportion to the effort you expend in its behalf. It is going to require inconveniencing yourself, possibly a long drive, hours of lost sleep, but in the end it will be worth many times more than all such efforts may mean to you.

The Journal subscribes to a somewhat limited newspaper clipping service to secure information regarding the profession throughout the state. This service has served the basis for supplying the items for our News Column. Its limited scope does not enable us to chronicle all the professional happenings in the state. In order that we may be enabled to publish a larger number of items that are of interest to the general profession we are asking our readers to favor us with local newspaper clippings and news items. This co-operation will be sincerely appreciated.

The more money The Journal of the Medical Association of Georgia makes out of its advertisements the less it costs the State Association to run the paper. This means that every member of the State Association has an interest in the advertising columns. If one business firm advertises and another does not, patronize the one that does. It is money in your pocket.

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32 x 3½"	12.75	3.20
31 x 4"	14.25	4.00
32 x 4"	14.90	4.10
33 x 4"	15.75	4.20
34 x 4"	16.70	4.35
35 x 4"	16.80	4.60
36 x 4"	17.45	4.65
37 x 4"	17.65	4.70
35 x 4½"	21.20	5.60
36 x 4½"	22.50	5.75
37 x 4½"	23.60	6.20
35 x 5"	24.40	6.35
36 x 5"	25.10	6.55
37 x 5"	26.30	6.60

All other sizes not included in above list also furnished. Non-skids at 10% additional.

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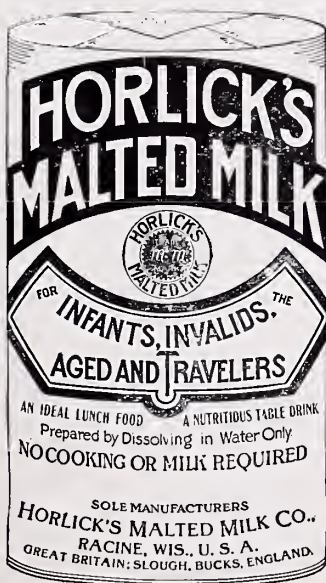
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No. 11

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MEDICAL INSPECTION OF SCHOOL CHILDREN.*

By W. L. Funkhouser, M.D.

Medical inspection of school children started a few years ago by the health departments of a few of the larger cities endeavoring to detect contagious and infectious diseases, thereby preventing the spread of the acute exanthemata. It was at once observed that many children were suffering with defects which were crippling them physically and impeding or limiting their mental development, the correction of which would result in a normal, active, energetic pupil. There then developed a system of inspection which has passed the mere recording and correcting of defects, to the reconstruction of the school life of the child; the mental defectives given a chance, the tubercular especially cared for by curing or arresting the disease process, at the same time giving him an education; the poorly nourished, starved little waif given a good nourishing meal. Even now, with the evolution

of a big system of inspection, the work is but in its infancy.

Medical inspection started in the large cities, but it was soon found to be practical in the small cities, then towns, and there is a belief that it is just as essential and practical in the rural districts. It is with this firm conviction that I offer this paper to you today. It was with this end in view that I prepared a paper for a recent meeting for our discussion, but was detained; at the same time Mr. Ellis of Tifton was preparing his bill, which is broader and more sweeping in its scope, not only for school inspection, but general health measures. We must push this measure in our respective counties, so that we may develop these much needed reforms in our localities. I wish to give you the system as used in Rome, with the hope it may create enough interest for you to boost school inspection in your respective homes. It is coming, gentlemen, here as elsewhere, so we might as well be the leaders as the followers. The responsibility is ours, or rather the opportunity, and we must face it and the sooner the better.

It is not necessary to take your time to mention what it will do for the future

*Read at meeting of Seventh District Medical Society, October 14, 1914.

citizenry of our country, but I do wish to mention a few truths it means to us physicians. First, better work on the part of every one of us. How? Because our cases, for we are the medical adviser of the family, are going to be checked up by someone else, and if a gross defect is found your attention will be called to it.

To consistently fulfill our obligation to the child intrusted to our care, guidance and government, we should at least monthly, if an infant, certainly biannually, if a child, examine carefully for beginning defects. These defects, being recognized, can be corrected and when he enters school he will present a natural, healthy, easily taught child. This enables you to gain the confidence and support of the mother, will put you in better touch with your patient, at the same time satisfy you to know that you are rounding up your cases. Giving to each of us methodical system in our work will enable the medical inspector to put his time on the cases who have not been so fortunate as to have had a physician to guide their daily life. Medical inspection is just a part of a movement that is taking the country by a wave of enthusiasm—it does seem to be leaning toward the ancient custom of the heathen Chinese, Pathus, cults. Various schools are in vogue, because we, with some exceptions, are failures when it comes to really curing disease. Everyone recognizes the fact that typhoid, measles, scarlet fever, and lots of other diseases may be prevented, but we do very little toward perfecting a cure. The public is appreciating this, and is more in line with their thought. Vital statistics have shown that 25 per cent of infants die before they reach two years of age, and that of one that dies, five are sick. Statistics have shown that a very large percent of diseases and deaths are preventable. The business man reasons that if the most unhealthy section of the country, the Panama Canal Zone, can be made ideal, disease free, why can't my family, by skilled regulation, be kept well. That is the key note that has built up medical inspection and the plea I make for you is to start that careful routine inspection and examination from the hour of birth. This will be the revolution that will cause the next generation to take up where we leave off, so that we may well look for freedom of unnecessary destruction of life. With the wholesale destruction abroad, we must conserve our youths and maidens so

that they may develop into strong, healthy, well educated members of society.

The most striking observation we make while attending post graduate work, is that we are not thorough enough in our physical examinations. "We have eyes and see not, and ears and hear not." When we develop a routine of careful examination we will not use a throat wash for chronic enlarged tonsils and adenoids, or eye wash for inflamed eyes with a vision of 20-40, or salts, aspirin and quinine for headache with marked astigmatism. We will be better satisfied with ourselves, if we have done our work well, the laity will soon see what we are accomplishing for them, and will have a greater respect for us. They will develop a greater dependence on us and have a greater regard for our work and services.

The first step to perfect medical inspection is a rational registration of births. It is humiliating to think that most every other country has its birth registry. The baby being the greatest national asset, surely should have some cognizance taken of his arrival by being placed on the balance sheet of the nation's statement. We, as physicians, must not only support the movement for a system of national birth registrations, but must conform promptly with the regulation, as well as educate the public to its importance. You have no idea how much room and money it takes each year to care for the under-age sent by parents using the school system as a nursery, to say nothing of the damage done the little brain trying to force it to do the impossible. This could be obviated by requiring each child on entering to present a copy of his birth certificate.

The system as applied to Rome is as follows: Every child on entering must present a certificate of successful vaccination or three unsuccessful attempts within twelve months at intervals of not less than ten years. If for any reason a child should not be vaccinated, the concurrent judgment of the inspector and the family physician will excuse for that year. If there is a difference of opinion the city physician will decide. Each school is visited once a week. The routine is as follows: All children who have been absent for three or more days without a known cause are sent to the office of the inspector to determine the cause, should there be any possible contagious illness, or any pupil the teacher suspects as having any trouble or suspicion of having come in contact with any

contagious disease. Following this, there is an inspection of each child in the schoolroom. The inspector goes to the school room, standing in front of a window, and each child, with sleeves rolled up to the elbows, finger of each hand depressing the eyelid of the corresponding eye, head held back and mouth open. This gives ample chance to detect any eruption on hands or arms, face, throat, or mouth; at the same time to detect sore eyes, decayed teeth, etc. They then pass, turning back of head; if hair is long it is separated, and the hair, scalp and neck are thus examined. No child is touched, and two to five minutes is all that is necessary to complete the inspection of the room. Any suspect is asked to report at once to the office, when a complete examination is made. The other days, the teacher makes the routine inspection each morning the first thing, sending home any contagious infection, or in case of doubt sending to or for the inspector. Ten minutes' talk at each normal on the contagious and infectious diseases puts the teacher in a position to recognize these conditions, except, of course, border line cases. Having done this, there should be ample time left to examine from ten to fifteen pupils. This examination consists in testing the eyes for far and near vision, watch test for hearing, examination of ears, nasal structures, examination of the teeth and throat, or anything else that may arise, without causing pain or disrobing. If mental defects are suspected, they are subjected to the Bunt test. Should a defect be found, a blank is used to notify the parent, a record kept for reference, and to enable the case to be followed until final disposition. From this record, the case is from time to time checked up, to determine if any heed has been taken of the notice. If none, a notice is sent asking the parent to call at the school to see the principal, who will explain the condition and see if any co-operation of the parent may be solicited for the betterment of her child. If no cognizance is taken of this, the city nurse will be given a list, she will call on the parent to see if she cannot do something toward educating the parent toward correcting a defect which, if unheeded, may work a serious handicap toward his progress in school, as well as preventing him from becoming a strong, healthy man. Every child is examined each year and a physical record card filled out which accompanies the child through school. There is a record kept, giving an itemized account of

each day, totals for week, month and year. Any time the inspector's work may be observed or checked up. I also have for distribution circulars giving instructions as to the care of the nose and throat, teeth and head, all of which will educate the parent as to the care of the child. The following is some of the gross results of inspection in Rome for the year 1913-14:

Inspections made	47,704
Examination	1,752
Re-examination	443
Eye strain	165
Squint	16
Tonsils	93
Adenoids	69
Hearing	21
Teeth	324
No defective	597

Results:

Treated	249
Glasses	53
Operated	27
Improved	19
Ignored	211

The sanitary condition of the plumbing, the cleansing of the building, ventilation, adjusting of desks to child, floor, light, and air space per child has been incorporated among the duties and responsibilities of the inspector. The supervising of the physical culture training, and the sale of lunches to the school children, are all under the medical inspector.

The cry of the country today is to protect and conserve the child. Large organizations are being formed with this end in view. Philanthropists are putting money into the effort which has for its aim better children, better men, a better nation. The opportunity is before us to further this movement in our own community. Let us put our shoulders to the wheel and give every innocent, dependent child a chance to be stronger, better, cleaner, and healthier; to preserve the health of the strong; to strengthen the weak; to help the defective, making him a wage-earner rather than a dependent, and in every way create a higher standard of well bred, well cared for American citizen.

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PROGRESS IN THE TREATMENT OF PNEUMONIA.*

By W. F. Peacock, M.D.

This subject is too large to discuss its morbid anatomical and pathological changes, besides we are all quite familiar with its nature and different stages. In my opinion the judgment and professional skill of a doctor is taxed as great or perhaps greater in the treatment and management of pneumonia than any other disease. Many years ago the idea prevailed that the mortality of the disease was due to the blocking of the lungs with the deposit, as a result of the inflammatory process. The burden of their efforts then was to check this inflammation, which they attempted to do by blood-letting, blistering poultices, cathartics and tartar emetic, withholding nutritious food, cold water and fresh air in their efforts to weaken the enemy. They also, as we can see, weakened their patient. Results of this treatment forced the conscientious observers to use as stock remedies veratrum, aconite, and antimony to combat the rapid and bounding pulse. Whisky, quinine and morphine also were used. Results were still unsatisfactory. There dawned an era that lobar pneumonia was self-limited and ought not to be interfered with unless the vital forces began to weaken, calling for supportive and stimulating treatment. Results under this plan were little more promising, but also lent emphasis to the homeopathic teaching. The use of coal tar preparation was likewise disappointing.

Now, we can control every known symptom by some of the tried remedies, yet the mortality still stands high. These practical demonstrations for the lines followed in the treatment of the disease are not without their beneficial influence in its study today. Although so far as its mortality is concerned we are still disappointed, but effort after effort, and failure after failure, only stir the profession to collect the facts gained by experience, and place them before the eyes of a steady march as pitfalls to be avoided. Where is the man today who would bleed and rebleed, or use veratrum, aconite and antimony until his pneumonia patient was moribund? The light of experience forbids such a course, but we are still under the burden of undiscovered success. While for the past decade a conservative and expectant man-

agement of these patients with nutritious food, plenty of water and an abundance of fresh air, and control paid with counter irritants, hot or cold application, or, at times, morphine hypodermically. Heat stimulants are sometimes apparently necessary.

This expectant or conservative plan is mostly accepted at present, but varies between the two extremes according to the opinion and skill of the individual physician, constitution, condition and circumstances of his patient. After the heroic plan fell into disuse a closer study of its pathology was instituted of its nature by physiologists and pathologists, when a more hopeful view was entertained of its successful management. Along with the prevailing views the bacteriologist began to investigate and show that the inflammation was due to progressive actions of the pneumococci, together with the often present diplococcus staphylococcus and streptococcus, but he, being unable to tell us how to destroy or neutralize the baneful influence of these bugs, we are still watching our patients succumb to the ravages of this disease. Notwithstanding defeat has confronted us at every point, we are still optimistic that at a very early date we are to realize through the eternal vigilance of investigators a crowning success in the cure of this dreaded malady. Scientific investigators are now tabulating results obtained upon the theory of the pathological changes, both local and systematic, regarding pneumonia, no more a local lung disease than typhoid fever is an intestinal disease, but show a retention of sodium chloride in the lungs, phosphates in the general system, while the blood is loaded with fibrin, with an undue alkalinity and a deficiency of protein. The viscosity of the blood being due to the retention of sodium chlorides. Before I bore you too much with these random remarks I would like to say I do not believe any medical agent in common use today has but little, if any, beneficial effect. Therefore, when I have cleared the deck, so to speak, with a large dose of calomel, I then give little medicine, looking only to the comfort of the patient, trying to conserve his vital forces by whatever means I consider would most likely sustain the patient's vitality, losing sight of the fact that I am curing pneumonia, because I do not consider we do much good with medicine.

With the present lights before us the chief indications for drugs in the ordinary case of

*Read at meeting of Toombs County Medical Society.

acute pneumonia are to forestall the failing powers of the lungs and heart, which appears to be fairly well met by the following prescription suggested by Mays of Philadelphia:

Strychnine Sulph., one grain; Quinine, one dram; Ammo. Chlor., one-half dram; Tr. of Iron Chloride, one ounce; Chocolate Syrup qs., four ounces. One teaspoonful four times a day.

It is possible that a proper knowledge of the internal secretions, together with serum therapy, will master this dreadful foe.

PNEUMONIA, PRECEDED BY PLEURISY AND ACCOMPANIED BY JAUNDICE.*

By Stewart R. Roberts, M.Sc., M.D., Professor of Medicine, Atlanta Medical College.

An electrician, 22 years old, entered the hospital on December 24, 1914, complaining of a pain in his left chest. His family history is valueless. He had chills and fever as a boy and occasional malarial attacks since. Four years ago he had pleurisy in the same place as his present pain, and this attack began and feels like the first. Venereal diseases denied. He has been in Atlanta three months, coming from a malarial region. On the night of December 20 he had a severe chill which lasted for an hour and was followed by high fever and a "catch" in his side. Inspiration and coughing make this pain worse. His cough is not severe, though he expectorates a dark mucous, but it is neither a prune juice sputum nor bloody. After the chill he had a headache, and his eyes still ache. He is constipated, and has no appetite except a craving for acids. He has been nauseated, but has not vomited. He is rather just drowsy and weak, and his throat feels sore.

His tongue is heavily coated, throat inflamed. There are a few rales in the right lung, but these disappear on repeated breathing. There is tenderness on percussion at the sixth rib, in left anterior axillary line, and a friction rub and pain on inspiration. There are a few mucous rales throughout the left lung, more numerous at the base behind. In this region is a very slight dullness, though fremitus is equal in both lungs. At 9 a. m., at entrance, T. 99°, P. 98, R. 26. At 12:30 he began to complain of an agonizing pain in the left axilla, and of being very weak and

depressed. He was given hypodermically 1 grain of codeine, but continued in pain and became restless and nervous. At 4 p. m. T. was 103.1°, P. 108, R. 28, and he expectorated a white frothy fluid streaked with bright blood. The pain of the 20th was mild compared to this new pain and he spent a restless night. On the 25th at noon, T. 103.2°, P. 120, R. 28. He lay with a flushed face, left cheek more flushed than right, a fever blister in right angle of mouth, eyes red, rather panting than breathing and with an occasional expiratory grunt. The pulse was full and bounding, and contrasted sharply with the small, easy wave of the previous day. Blood pressure, systolic 125, diastolic 72, pulse pressure 53. Movements of left chest impaired, vocal and tactile fremitus and dullness over and limited to the lower lobe of the left lung. Crepitant rales heard over this area, more numerous at the base behind and at the close of inspiration, breathing distinctly tubular. He was transferred to the fresh air of the porch and given morphia gr. 1/8. That afternoon he became delirious at intervals. Urine was 1020, acid, contained a trace of albumen, many granular casts and a few pus cells. Blood: H. 90%, reds 5, 400,000; whites 20,000, with P. 88, S. L. 9, L. L. 3. No plasmodia seen. At 10 that night he got out of bed in his delirium, and a restraining sheet was used. Sputum still frothy and streaked with blood. On the 26th in the evening pulse became irregular, though the volume continued good; frequent coughing and expectoration, complaining of pain in left chest, free perspiration, T. 103.6°, P. 136, R. 38. On the 27th, there was a change for the worse, the nails, tongue, lips and ears became cyanosed, there was extension to the left upper lobe, the pulmonic second sound was more markedly accentuated and doubled. Jaundice developed. Coughing less and expectoration more copious, a yellow mucous. Blood pressure fallen to 98-38-60. The jaundiced sputum became streaked with a prune juice color the night of the 27th. T. 102.8°, P. 136, R. 46. On the 28th the abdominal distension developed, patient complained of feeling cold, jaundice deeper and skin had a greenish yellow tint, sputum a greenish yellow, no prune juice streaks. Pulmonic second sound less distinct, and a soft systolic murmur developed at apex. Patient sank into a constant muttering delirium on the 29th, urine and feces involuntary, cyanosis deeper, stools liquid and green, sub-

*Read at meeting of Medical Association of Georgia, Atlanta, Ga., 1914.

sultus tendinnm developed, twitching of the facial muscles, a restless turning in bed and a jerking of the larger muscles. Death on the morning of the 30th.

Patient was given fresh air and an abundance of oxygen, and during the attack morphia for the pain; strychnine, digitalis and camphor in oil for the heart; calomel and quinine enemias for the distension.

Discussion.

After a plenrisky of five days pneumonia of the left lower lobe developed, followed in two days by extension to the upper left lobe. He was delirious in the first twenty-four hours and grew worse from the beginning. There are three classes of pneumonia cases, those that get well easily, those that need most skillful treatment to tide them over, and those that die in spite of all treatment. This case belonged to the last group. The leucocyte count and the early and severe jaundice are evidences of the severity of the toxemia. A young man should stand an ordinary pneumonia far better. The severe jaundice, accompanied by liquid stools containing an abundance of green bile, is proof that the common duct is open and evidence that the jaundice is hemolytic in origin, due to the destruction of red cells in the circulation and the resultant blocking of the finer bile channels. An ordinary jaundice is not a good omen in any infectious disease or septic state. The cause is rather in the blood than in the liver as in an obstructive jaundice.

On the 25th the blood pressure was 125-72-53, and on the 27th, 98-38-60. The systolic pressure fell 27 mm. in two days, the diastolic 34, and the pulse pressure actually rose. I do not know the cause of this last change. This is evidence of the danger of giving vaso-dilators indiscriminately and without a careful watch of the pressure. This case bears out Gibson's rule that a rise in the pulse in number of beats over the blood pressure in millimeters of mercury is a bad prognostic sign. At noon of the 25th the pulse ranged from 98 to 120, and the systolic pressure was 125; on the 27th the pulse had risen to 136 and the pressure fallen to 98, a difference on the side of danger of 27.

It is a good rule to examine the lower back in suspected pneumonia. One should be able to mark out the external borders of the different lobes of the lung and thus be able to determine accurately the site of the process

and its extension from day to day. The crackling crepitant rale and tubular breathing are the distinctive sounds of lobar pneumonia. Add to these the increased fremitus, dullness and the picture is easy. To quote Austin Flint's definition, written in 1856: "If a person be seized with a chill, which is followed by high febrile movement, and lancinating pain in the chest, referred to the neighborhood of the nipple, accompanied by cough, with an adhesive, rusty expectoration, and a well marked crepitant rale is found on auscultating the posterior surface of the chest on one side, it is at once evident that he is attacked with pneumonitis seated in the inferior lobe."

ADENOID TISSUE, ITS RELATION TO THE MIDDLE EAR; CONSEQUENCES.*

By B. H. Minchew, M.D., Waycross, Ga.

Adenoid tissue is known under several names—adenoid vegetations, pharyngeal adenoids, pharyngeal tonsils, epipharyngeal tonsils. They are chiefly located on the superior and posterior walls of the epipharynx, though they may extend into the fossae of Rosenmuller and to the mouth of the Eustachian tubes. Adenoids are hypertrophied lymph glands which normally exist in the space in which they are found. The chief cause of adenoids is the irritation and inflammation which occur upon the mucous surface during an attack of some of the exanthematous fevers. It is a well known pathological law that the lymphatic structures of children become enlarged in response to bacterial stimulation; whereas, the same stimulation in adults does not cause the same enlargement.

According to the statistics on this subject by McBride and Turner, adenoids are found more frequently between the sixth and fifteenth years of life, though they may occur at any period; in fact, the writer has operated on several cases of adenoids in adults within the last few months. The investigators mentioned above found in children, who were otherwise normal, that adenoid tissue was present in from one to nine per cent of all cases examined. In deaf mutes they are present in 50 to 73 per cent of all cases examined by the same authorities.

Climate probably plays but a small part in

*Read at meeting of Eleventh District Medical Society, Douglas, Ga., November 17, 1914.

the causation of adenoids, though it may be said that a cold, damp, changeable climate subjects the mucous surfaces, as well as the general system, to repeated shocks which lower the vitality and render the lymphoid tissue an easy prey to infection.

It is useless for me to go further into the pathology of this growth, or presume that a diagnosis cannot be made by anyone present, by naming such symptoms as are always present, and has been learned by even the laity as significant of adenoid tissue. For illustration we see daily the typical adenoid face; note the dull glare of the eyes, broad flat nose, slit-like nares, open mouth and the dull expression of the face. If the artist could have made it, he would have shown an irritation around the nose, and fissures in the corners of the mouth. In fact, we can picture in our mind scores of children with this expression.

In writing a paper under this title it is hard to omit mentioning all the evil effects produced by this disease. In the practice of one who confines his work to a special branch with the study of special diseases, it is easy to connect all the ailments with which one may be affected to some of the diseases which come under his observance. With this in mind, the writer does not want to make one doubtful statement regarding the disease under discussion. Indeed I shall not insist that adenoid tissue is responsible for bow-legs, nor shall I present cases of club-foot and declare that adenoid tissue was the cause of it, although Frederick Coolidge called attention to the apparent relationship existing between adenoids and various forms of club-foot, and Ballenger verifies the saying, "If you will show me a bow-legged man, I will show you one who had adenoids in infancy." Adenoids affect nutrition, partly through anemia and partly through an excess of carbon dioxide in the blood. These two conditions cause faulty metabolism and nutrition. These bones are deficient in lime salts; hence are soft and bend easily under the weight of the body.

It is easy to understand what effect a growth that hinders free respiration will have upon the development of any individual, and especially at the age that this growth is so likely to appear. Besides this, it comes at a time when its effect will be more serious because of the low vitality under which the child is laboring. Following any of the infectious diseases of childhood, we can under-

stand that its effect will be much more damaging than if it were a disease that presented itself upon a strong individual in full strength and vitality. We often hear parents say that their child has never fully recovered from measles or scarlet fever, and I am sure each of you has seen many cases of adenoids develop from each of these diseases and the child remain almost an invalid until tonsils and adenoids were removed. It is quite a serious matter to have the respiration and free oxidation hindered at any time, and especially following a disease that has taxed the vitality of every cell in the body to overcome any of the infectious diseases that precede a growth of adenoid tissue. When one is forced to carry on any function in an unnatural way, or through an unnatural channel, we can understand what the probable results may be. It is certainly true in this disease. When a child is forced to breathe through the mouth, rather than through the natural nasal chambers, it loses the control that the turbinates have upon the temperature of the air as it is breathed into the lungs. Besides this, it does not have the filtering process that is carried on in the nasal chamber by the cilia, preventing the entrance of some parasitic infection into the glandular system of the body.

It is not for this paper, however, to deal with what may be controlled in the way of diseases by the absence of adenoid tissue, or what local or constitutional diseases may be caused by the presence of it. Enough could be written along these lines to tax your patience and take up the time allotted to me; but the title must be adhered to and its relation to the middle ear discussed.

Adenoids are a prolific source of inflammation in the Eustachian tube, middle ear, and mastoid process. McBride and Turner have analyzed 307 cases, 255 (more than 83 per cent) had involvement of the ear; of the 255 cases, 144 were suppurative and 111 were, more or less, deaf with non-suppurative disease. They say: "We have, more than once, noticed in children (affected with adenoids) suffering with non-suppurative otitis media that in those, in whom the membrana tympani had assumed an appearance which can be likened to that of ground glass, especially when there was a permanent pinkish tinge, the prognosis as to improvement by subsequent treatment was not good, sometimes positively bad." It appears, therefore, that aural complications, whether of the suppurative

tive or non-suppurative type, may be serious. It is a common clinical experience that children with adenoids who complain of recurrent attacks are relieved by tympanic inflation. The Eustachian tubes are closed by catarrhal swelling, or plugged with thick, tenacious mucus, and the air in tympanic cavity becomes absorbed and rarefied. The drum head is retracted and the mucous membrane, which lines the tympanic cavity, is hyperemic. Catarrh of the tubes and middle ear is thus established. Suppurative otitis media is also caused by adenoids. The infective material from the epipharynx, which is always found in abundance, enters the tubes and middle ears during the acts of coughing, sneezing, or other violent movements of the pharyngeal and palatine muscles. Then, too, the ciliated epithelium of the tubes may become atrophic or broken down by the pressure of the opposed walls of the catarrhal swelling. The absence of the cilia permits easy ingress of the infected secretions into the middle ear, an infection thus becomes established in the tympanic cavity. Having gained a foothold in the tympanic cavity it is but another step for the infection to invade the mastoid cells. The labyrinth may also become involved in the infected inflammations of the middle ear. Deafness, in some degree, is always present in the foregoing aural complications of adenoids.

With my short experience, it is hard to say how long an involvement of the middle ear will go on with safety. It is certainly true that this serious condition is treated but lightly by most parents and by some physicians.

As soon as a child can recover from an earache, either by an adjustment of the drainage through the tubes below or by rupture of the drum membrane, the case is considered well, and indeed, it may be, if the drum membrane remains intact; but if the drum membrane is ruptured, and suppurative otitis media is evident by an odor and a persistent discharge, a serious condition is then in its infancy. With the continued discharge through the external ear one can say in 90 per cent of the cases that he has adenoid tissue covering the Eustachian tubes and cannot recover until this mass has been removed and a proper germicidal treatment rendered. If the case goes on too long, even an operation for adenoids will only offer a temporary relief.

It is an experience that is often met, that

an operation on a child, for adenoids, who has had a discharging ear for several years that the discharge from the external ear will improve for only a limited time, it simply means that the necrosis in the middle ear has involved the ossicles and, in a great number of cases, the mastoid cell with the breaking down of this tissue and the drainage established through the tubes will only aid for a short time, while the necrosis and the destruction of the middle ear is going on without hindrance. It has been my sad experience to see a fatal termination of two cases that originated in early childhood with adenoid tissue, followed by an involvement of the middle ear, rupture of the drum membrane, persistent discharge from the external ear, a chronic mastoiditis, and, finally, a breaking down of the wall separating this area from the brain tissue and the chapter closed in death by meningitis. Each of these cases were operated upon after a discharging ear had existed for several years, the mass of adenoid tissue removed, but the necrosis could not be stopped, and death resulted from a disease that is indeed malignant, originating from a condition several years before that was considered benign.

The lesson that will do us most good may be the hardest to learn, and a disease that may be tragic in its outcome may be the simplest, or considered so, in its origin. If parents could see the closing chapter of a condition that they consider simple, even with the advice of a physician, that delays are dangerous, the lesson of prudence would be more easily learned.

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REPORT OF A CASE OF VINCENT'S ANGINA.*

By J. M. Smith, M.D., Valdosta, Ga.

It is not my purpose in reporting this case of Vincent's angina to contribute anything new to the etiology or pathology of the disease, for indeed this is not an unusual case in any respect, being an exceedingly mild one.

There is room for so much error in the diagnosis of these cases that I thought a report of this case, even though it is uninteresting in itself, would serve as a means to call attention of this body to some of the cardinal symptoms of the disease and the liability of falling into error in our diagnosis.

A little girl twelve years old was referred to me by her family physician as having an attack of follicular tonsillitis. He had treated the case two or three days without any apparent improvement. The child gave me a history of ordinary sore throat, some pain on deglutition. She was frail in appearance, otherwise her health seemed to be about average. There was some enlargement of the cervical glands. There was a temperature of about 100° F., noticed some slight chilly sensations during the day, appetite impaired.

The left tonsil was covered by a greenish color, rather thick and slightly adherent, although the membrane could be peeled off with a minimum amount of bleeding. The diagnosis was not clear to me. Making an application of iodine, I gave her instructions to return the next day.

The following day the symptoms were greatly magnified. The temperature was higher, pulse more rapid, considerable signs of depression, the cervical glands were tender upon pressure, breath foul and tongue coated. The membrane had spread from the left tonsil to the soft palate, completely enveloping the uvula.

With a swab I was able to peel off the membrane covering the tonsil without any bleeding whatever, leaving the tonsil in a fairly healthy appearance. The portion of the membrane covering the uvula could not be detached so easily at this visit. Still not sure of my diagnosis I was confident that improvement had begun and that on the following day I would be able to remove the membrane from the soft palate or uvula.

To my surprise, however, the membrane reappeared on the tonsil and had involved the right tonsil as well as the pharynx. Not being accessible to a pathologist I was not able to confirm my clinical diagnosis of Vincent's angina.

I am sure there could be no mistake in my diagnosis because of the clinical picture of the case. For more than a week this condition prevailed, during which time I made applications of various solutions, perhaps getting better results from nitrate of silver.

As I said in the beginning, this case is not of unusual interest, but perhaps a discussion of the disease would save us a blunder at some time in our diagnosis. Dr. Dapaquier, of New Orleans, reporting a case, uses this language: "Too much publicity cannot be given to the fact that the great majority of practitioners know Vincent's angina only by name, and that no pains are taken to differentiate it from diphtheria." He goes on to report a case that was sent to the Charity Hospital with a history of diphtheria, 100,000 units of antitoxin having already been administered.

Regarding the treatment, I confined myself to the use of nitrate of silver and iodine with what would seem to be good results; however, I know this was a mild case and the use of these preparations would not avail much in the severer types of this disease.

Dr. H. Rendue, St. Joseph's hospital, Paris, reports most magical results with the use of arseno-benzol. He uses it in oil suspension. Akhard and Flandin used arseno-benzol by blowing the powder on the tonsils. This treatment seems to be in higher favor at this time than any other preparation now being used.

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*Read at meeting of Eleventh District Medical Society, Douglas, Ga., November 17, 1914.

WHY I WANT TO BE A DOCTOR.*

By H. P. Smith, M.D., Pearson, Ga.

From my early boyhood days I have wanted to be a doctor, because I soon learned that everybody knew the doctor. Every schoolboy knew him and would exclaim, "There goes the doctor." He is before the people day and night. And I have heard the neighbors say, "What a brave man the doctor is," and that "The worse the disease, the better he liked it." And all these things, when I was a boy, I liked to hear, because I was thinking of trying to be a doctor.

After I began to reach maturity I wanted still more to be a doctor, because I soon saw to be a doctor you had to be a public man. His opinion is asked in many things besides that which is medical. He is supposed to know something of everything that comes up, and I soon saw that he was for the people, by the people, and of the people. And I have found out that it is the people he wants; it is the people he must have, and it is the people he gets, and not money.

It is true the doctor's heart must be centered upon medicine. It must be his chief aim in life. Yet he must, in a sense, become a part and parcel of a wonderful combination. He must, in a word, become a lawyer. He must at least understand legal protection in just measures. He must be a botanist and must add the perfumed words of that sweet language to his vocabulary. He must be a farmer. He must know how to grow other crops besides transplanted germs. He must be a teacher. He has much to do besides give medicine. He must teach and promulgate the great laws of health. These laws, when obeyed, will unquestionably prove a greater blessing to suffering humanity, than *materia medica*.

I want to be a doctor because he is one whose life finds a repose in the hearts of the people. I want to be a doctor because I want to live in the hearts of my people, when I am dead and gone. I want it said of me that I still live in the hearts of my people. We all can do something that will cause us to live after we are gone. And I believe a doctor can do things that will cause him to live in the hearts of more people than any other professional. Jenner, the great murderer of smallpox, is dead, but still lives.

Harvey, who chased the circulation, is tombed away behind a marble slab, but every schoolboy ten years old knows him. Crawford W. Long is gone, but every patient we anesthetise sings, or tries to sing, a song to his memory for giving them a painless operation. I cannot be a Jenner, I cannot be a Long, but I am trying to be a doctor.

During a great plague in France the doctors decided that nothing could be done to stay the plague and save the people, unless one of the victims of the disease could be dissected and the nature of the disease learned. But who would do this? After meditating, Dr. Guyon arose and said he would do it. He entered the hospital, made the dissection and examination, wrote out the results, and in a short time he himself died, but the physicians learned how to treat the disease and the plague was stopped. Was he not a noble doctor? And it is always a doctor and a doctor like Dr. Guyon, who saves the public. One like Dr. Rush, who fought the yellow fever in 1797. One like Dr. Gross, who fought the cholera in 1832. One like Dr. Koch, who fought the bubonic plague of recent times. Brave deeds like these make me want to be a doctor.

A doctor is ever before the public. He has to do with man's entrance and exit, the alpha and omega of his existence. Birth and death, life and health, germ and disease, joy and sorrow, youth and age, with all the phases of human life, the doctor figures. This is a nobler, this is a higher, this is a better job than being king or president, and you can't blame me for wanting to be a doctor.

In the South American states, the great statesmen are most all doctors. It should be so here in Georgia. No better men can be found for the governor's chair, or to fill the senate or legislative halls, than from our ranks. There is no other band of men as noble as ours, no other class of men has done so much for humanity. Who is it that the public seek night and day, but the doctor? And we have to deal with the most important thing known to the human race—life. Life is all there is in the universe. Life is that which the doctor seeks to save and perpetuate. So then what can be better or greater than the doctor? The fate of kings and queens is intrusted to us. The public hangs breathless upon the doctor's decision.

Rejoice, then, all you who have aspired and reached the place where you claim that great name Doctor. It is above all other

*Read at meeting of Eleventh District Medical Society, Douglas, Ga., November 17, 1911.

names. It is the brightest star in the public sky. That name means something. It means a good man, and that is why I want to be a doctor.

THE INFLAMMATORY AFFECTIONS OF THE NASAL MUCOSA AND THE ACCESSORY SINUSES IN CHILDREN—FROM THE VIEWPOINT OF THE GENERAL PRACTITIONER.*

By H. C. Whelchel, M.D., Douglas, Ga.

I shall not attempt to go into the anatomy of the nasal accessory sinuses, for they are too many and too complicated, especially in their development. The frequency of infectious diseases in childhood and the concomitant inflammatory changes of the nasal mucosa explain why the sinuses should be involved during this period, and specially does this occur in influenza, scarlet fever, measles, diphtheria and pneumonia.

In a great majority of cases there is a primary inflammation of the nasal mucosa, and the sinuses involved become so from direct extension of this inflammation, and the swelling of the soft tissues around the sinus openings, causing the secretions to be retained as a result of the closing of the sinus.

It is not unusual in older children for some of the sinuses to become involved in inflammatory affections of the nasal mucosa and coryza, and in the contagious diseases of childhood, by the extension of the inflammatory process from the nasopharynx to the sinuses and cells, therefore frequently accounting for the suppurating discharges from the nose or ears in later life.

Frequent headaches in children should always arouse suspicion of sinus inflammation, hence we should make careful examination over the region of the sinuses for tenderness to the touch, bearing in mind, however, to localize pain in the young is very difficult. A marked symptom of decided diagnostic value, when present, is the stopping of pain with appearance of a free nasal discharge, and the return of pain when the discharge ceases.

In the so-called strumous child, when there is a purulent discharge from the nose, with exoriated upper lip, we should strongly suspect sinus involvement. Depraved vitality is a powerful predisposing cause to the

spread of inflammatory processes, especially is this noticeable during the prevalence of epidemics of measles, diphtheria, whooping cough, and influenza, during convalescence from which sufficient care is too rarely exercised.

Again we should not lose sight of the fact that oftentimes the general health of the child was more or less seriously affected previous to the development of the nasal affection, as a result of the original disease, and to properly treat such cases the general health must be cared for, as local treatment alone will give but little relief.

Permanent lesions may be left in the nose after a single severe untreated coryza, and they are almost sure to result from repeated attacks.

Makuen has taught that the middle ear is in reality a sinus of the nasal cavity, and it may be involved by the infectious processes, in fact complications by continuity may involve the eye, the Eustachian tube, and the middle ear. The invasion of the meninges, though more rare, may nevertheless take place by the nasal route.

For the past few years I have discarded expectorants, quinine, etc., in the treatment of colds in children. I now treat them by spraying, irrigating or instilling some suitable antiseptic solution into the nasal cavity. The solution I most commonly use for spraying or instilling into the nose is Eucalyptol gr. xv, Liquid Albolene oz. 1, or Menthol gr. 1, Camphor gr. v, Albolene oz. 1. Spray several times a day both nose and pharynx. If an atomizer is not at hand have the mother place the baby in its crib and instill the solution into the nose with a medicine dropper, holding the baby in such a position that the solution gravitate to the posterior nares. In older children who can be taught to irrigate the nose, I use normal saline solution, or a saturated solution of Boracic Acid oz. xvi. Irrigate two or three times a day.

Again the mother will very often call your attention to the susceptibility of the baby to atmospheric changes and the frequency in which it contracts cold, or it may be the baby's slight cough, perhaps caused from bronchial vicitation; treat the baby's nose and pharynx, and remember that infants show a marked tendency to catarrhal processes. Or your attention may be called to a recurrent bronchitis, with bronchial spasms; in that event treat the child's naso-

*Read at meeting of Eleventh District Medical Society, Douglas, Ga., November 17, 1914.

pharynx, give alkalies internally, and a diet largely free of sugar and fats.

I do not want to be understood to say that sprays and irrigations will cure all cases of sinusitis when once developed, for many of those are cases for the specialist, but the point that I do want to insist upon is, that in all cases of coryza, bronchitis, influenza, pneumonia and all infectious and contagious diseases, look well to a very careful and decided nasal toilet, for by so doing you will in many cases prevent the spread of the inflammatory process to the sinuses and cells, thereby saving your little patient from a very serious illness and oftentimes, no doubt, a mother from a bleeding heart over the loss of a child.

THE EXAMINING PHYSICIAN'S RELATION TO THE INSURANCE COMPANY, ITS AGENT, AND THE APPLICANT.*

By J. W. Simmons, M.D., Brunswick, Ga.

It might seem the height of presumption for me to read what might be termed by some of you honorable gentlemen as a dissertation on morality, and by others an uncalled-for indictment for the infraction of so-called medical ethics; but let my apology rest with the acknowledgement of my own remissness and a personal plea of guilty to many of the charges contained in it.

When a party is presented to us for an insurance examination, there are primarily interested in the matter four parties: The examining physician, the company for which he examines, the agent of that company, and the applicant. Let us first consider the interest of the latter three in the matter, and we will be better able to understand the relations which the first of them bears to the remaining trio.

First, the company, of course, desires the business, with the profits accruing to it from the annual collections of the premiums thereon; but it desires only such business in that regard as will form its principal asset, a body of policyholders the longevity of which in the whole comes up to or exceeds the average of the established standard of what their actnaries say they can do successful business with, or the standard on which are based the rates which they charge for

the proposition offered by their agents. For this reason they have employed skilled physicians to guard against the entrance of any policyholder into the body of this asset who might raise their average mortality rate, and thus endanger the aforesaid asset. These physicians are the medical directors in the home office and the examining physicians in the field. The latter are by far the most important.

Second, the agent is dependent for the daily bread of himself and family, in most instances, on the obtaining of acceptance by his company of the risk he proposes; yet it can be said with credit to the most of these men that they rarely present an applicant whom, of their own personal knowledge, they believe to be unfit. There are some, however, who cannot hide their disappointment and sometimes resentment when a risk is rejected, and will seek another examiner if the opportunity ever presents itself.

Third, there are several varieties of applicants with whom we have to deal. One thinks that he has enough insurance and says he is simply taking out this policy for his friend, the agent's, sake; he cares little whether he is accepted or not, and therefore can remember but little of his personal and family history. Another one has signed the application unwillingly, is hard to catch for examination, and will make the examiner lose valuable time by ignoring appointments. Still another is extremely anxious to get the insurance, and has probably had an unfavorable opinion from his family physician, or is suspicious in regard to his insurability. This latter class, the best of them, will tax the best examiner's skill, for he has to find out everything for himself, the applicant supplying only boosts for himself and family, and securely guarding the entrance to information that might have the slightest tendency to render him ineligible.

With these relations, and others that might present themselves as the story is spun out, in mind, we can consider the physician's relations in each regard.

There is not one of us who, if called a liar, would not resent the insult with the last ounce of energy and the last drop of Southern blood in our bodies, and yet some of us are satisfied to sign our names to insurance applications containing statements in our part of the application that we have not verified or attempted to verify. We fall into a rut or routine and our conscience be-

*Read at meeting of Eleventh District Medical Society, Douglas, Ga., November 17, 1911.

comes dulled to the extent that in minor applications we take too much for granted from a casual inspection and a supposedly correct statement of the applicant's medical history, entirely foregoing the tedious and arduous minutiae of a thorough examination from top to toe.

Perhaps we feel that we are paid too little for all that the company would require at our hands. In that case, it were better that we had not accepted commission. But after having accepted it, we should give them nothing less than the best, with the same spirit that we give our charity cases in practice the benefit of just as thorough examination and diagnostic skill as we do our best paying practice.

What the medical directors of the company require of us is as perfect a verbal picture as is possible of the applicant and his family as far as that is related to his insurability or non-insurability. They must see through the examiner's eyes, hear through his ears, feel through his hands, and judge the applicant's fitness entirely through the examiner's conscience and mentality; except in some instances, willfully mistated facts of previous record. Insurance companies are perfectly willing to forgive and forget errors of omission or misstatements for which the examiner is not directly responsible (hearsay evidence), but some of these companies expect their examiners to be sleuths as well as physicians, and I myself have been called down vigorously regarding an applicant's indulgence in intoxicants, for an innocent statement, that I simply did not take the interest and time to ascertain the falsity of; I had stated that I had known this applicant for two years, and the company took it for granted that I was familiar with his habits, whereas the facts in the case were that I had known him only casually, because we lived in different towns and I had not seen him more than two or three times during the two years.

While the company requires much more of us, as develops in the examination of some applicants, than can be placed in the spaces assigned to our answers to the questions on the blanks, there is always left an avenue of escape from an embarrassingly doubtful paper, in the letter that we can often append, clearing up matters on any point in doubt. Such letters will often commend us to the approbation of either the company or the applicant, as the case may be. Just as the clerk

who only does what he thinks he is paid for doing, never gets more than his work entitles him to, just so the examiner who lets an applicant go in over his signature with just enough on it to get by, will find his company, the applicant, and ultimately the agent, will see that he is paid no more than is called for, with no thanks in addition.

Some of us have probably heard of "curbstone examinations," in which the applicant's chest never feels the encircling tape, but a single statement on his part of the size of his undershirt and "how much he can expand" is sufficient examination of his respiratory apparatus; with histories gleaned from a casual conversation, and an urinalysis made readily by a pen in the hand guided by a brain in which is happily stored the knowledge of about what the excretion from well-behaved kidneys should be.

Unfortunately, the fraternal insurance companies doubtless get most of these during the strenuous times when an organizer is rounding up a considerable bunch of charter members, and there is not provided the regular fees, nor the time required for a more lengthy examination, so they say.

Our personal relations with the agent should be cordial and friendly, as his friendship, aside from professional relations, often paves the way for us into the homes of his policyholders, and at the same time make him realize that rejections are due as much to our zeal for the protection of his company's interest, as his energy in obtaining the business was due to his desire for his personal benefit and his loyalty to his company by his effort to increase their resources by the addition of the business.

Our business relations should be strictly professional, and the agent should be made to understand, as most of them already do, that securing the application was his business, while the mode, method and detail of examination is our business. Only last Friday I had an agent review an examination (a procedure, by the way, of which I heartily disapprove) of an applicant on whom I had recommended a postponement, and the agent said, "Well, you went into that examination pretty thoroughly—a little more than was necessary, don't you think?"

In life insurance work, to obtain the best results we should co-operate with the agent as much as is possible in obtaining early examinations. Many dollars for the agent, and much business for the company is doubt-

less lost every day by procrastination of physicians in insurance examinations. Many of us grab our hats and hustle when we get a call to a case in practice where there is a \$5 fee, yet we think any old time tomorrow will do to examine the risk whose application rests snugly in our breast pocket. Sometimes, though, we find that the party has changed his mind after signing. Maybe he has found by carefully figuring with another agent that he can get larger dividends elsewhere, or a contract that will cover accidents to his mother-in-law, a competency for his wife's second husband, and still leave enough to establish an annuity for his favorite charity. Or maybe he has inside information that the company for which you examine is about to go into the hands of the receiver, and he has decided to put his premiums in the savings bank, maybe. You are out \$5 at the end of the month or quarter, the agent is possibly out several five-dollar bills, the company is possibly deprived of slight additional income, and in the latter case the man's family is deprived of the necessities of life in case of his prior death, all on account of his caprice coupled with your procrastination.

It should be our business to examine each applicant as early as possible, before the ink is dry on the agent's part, while the risk is in the notion. It is also our duty to be as loyal to the company as are its agents, never letting a word drop that would cause dissatisfaction, on the part of the applicant with his contract. Experience shows that once the examination is made, and in case of acceptance the policy is delivered, the majority of applicants stick with the company if the company is reliable. In case we happen to examine for several companies, invidious comparisons are entirely out of place. Each of them has its features, in either the contracts, the rates, the returns, etc.

Much aid for the agent can often be rendered by speaking a good word for his company, without in any way committing an opinion as to the applicant's acceptance or rejection. While insurance companies are not supposed to be philanthropic institutions or benevolent organizations, yet they fill a most important place in our political, social and financial economies, and may God speed the day when every insurable man will see the wisdom of providing for those he loves after his protecting arm has fallen lifeless by his side, and the last sad rites are said over

the mound that marks his last resting place. It is not beneath the dignity of a physician, who knows the financial conditions in homes where the strong and stalwart one kisses the wife and little ones each morn and goes out to earn little more than the daily bread, to commend to them his friend, the insurance agent, who can tell them how that wife can live, and those little ones be clothed and fed after the Grim Destroyer has brought him low.

In the smaller cities in which we live, a majority of the applicants presented to us are persons whom we know, either intimately or casually. Many of them may be clients of ours to whom, under ordinary circumstances, we would be inclined to show partiality or extend favors, and yet many of them will hold us in higher regard if, in our examinations, we exercise the same care and diligence with respect to them as we would with absolute strangers. Even a close friendship, or an intimate knowledge of the life and habits of an applicant does not warrant the expression of a favorable opinion on him as a risk without the trouble of a thorough examination, as day after day contact may to a certain extent have partially blinded us to certain constitutional defects, information concerning which can only be obtained by the investigations required of us by the insurance company. In order that no ill feelings against us on the part of this class may arise, it is sometimes necessary to give the non-committal answer to an anxious inquiry as to acceptability, that "It is our duty to report facts as we find them, and acceptance or rejection or postponement rests entirely with the home office, after a review of our work and a comparison with the normal standard of acceptable risks."

Many applicants, fearing rejection, will ask for the destruction or withdrawal of the application, should there arise during the course of the examination a strong suspicion that we have found something that might debar them from obtaining the insurance. For several reasons this cannot and should not be done. In the first place, the application belongs to the insurance company from the time it is placed in our hands and the applicant presents himself for our work on him. In the next place, if the suspicion is founded on evidence that can be faked or changed, such as family or medical histories, the unscrupulous applicant, if this is his first attempt, can make application in another

company with another examiner for all the insurance he may require and can pay for, and mislead the next examiner by reason of the experience obtained in the prior supposedly not unsuccessful attempt.

In the third place, we are entitled to our fee for the time and labor expended in the examination. It is wise, therefore, to confine information gleaned from an examination to the writing on the papers sent to the home office, instead of advancing gratuitous information as to the result to the applicant. The honest applicant for insurance will respect your efforts to protect the company from undesirable risks, because he himself would hesitate in entering into a contract with an organization, the strength of which he knew was being undermined by careless examinations.

Sometimes an applicant is rejected and rendered ineligible for future insurance by the mention of a condition in his medical history, without the examiner having taken the trouble to enter a full and free explanation that might have saved him the rejection. I call to mind a case of a man who gave, in an examination in 1911, a history of an attack of what was diagnosed as "kidney colic" about two years previously, he explaining that the doctor said he was passing a stone through the ureter to the bladder. He was in bed half a day, his only illness since childhood that confined him to bed or in the slightest inconvenienced him. His urine showed up all right. No history of the passage of a stone from the bladder or symptoms arising from its presence there were given. The examiner made none of these comments that might have established a mistaken diagnosis, simply giving answer to the required questions.

He was rejected without even correspondence from the home office of this company, which itself is now seeing hard times, and on the history of that rejection probably has been rejected three times, and only been able to secure two very small policies of insurance. He has never had a subsequent attack and I have dared the medical directors of one or two of the fraternal orders to examine him personally and pronounce him uninsurable, feeling deeply my chagrin at the injustice done him in the first instance through my indifference.

It is easy to see from this how much easier it is for a man to obtain insurance in the first instance or with histories of previous

acceptances than it is for him to overcome a rejection, even though it was unjust. The utmost respect must be had by the medical examiner for the skeletons in the family and personal histories, and the applicant must be made to feel that the broad mantle of professional secrecy is thrown about his application, and that a true and correct application will serve better his own purposes than any attempts to deceive either you or the company.

While this paper has not been in the least scientific, nor probably enlightening, still if it serves the purpose of fixing in each of the examiners present the firm and steadfast resolution to never leave undone the things he ought to do, nor those things that he ought not to do, it will have accomplished all that the writer intended it should accomplish; but in the writer's case it will probably be as the words put in the mouth of one of his players by the Bard of Avon: "Twere easier to teach twenty what were good to be done, than to be one of the twenty to follow mine own teaching."

RURAL SCHOOL SANITATION.

In 1911, the National Council of Education of the National Association appointed a committee on health problems in education. At the same time, the Council on Health and Public Instruction of the American Medical Association appointed a committee to co-operate with the National Education Association on this subject. These two committees, acting as a joint committee, have for three years been working in this field. The significance and practical value of the co-ordination of the efforts of the teaching and medical professions of the United States is apparent. The possibilities of such co-operation can hardly be overestimated. After careful consideration, the committee was unanimous in feeling that possibly the most important and certainly the most neglected field in school hygiene was the problem of rural school sanitation. When an effort was made to formulate plans and remedies, however, it was soon realized that although every one was agreed as to the paramount importance of this field, there was little, if any, definite information available regarding actual conditions. It seemed necessary, therefore, that before any remedies were proposed or even discussed, a reasonable amount of data should be secured. Fortunately these

conclusions were completely in harmony with the views and policies of the United States Bureau of Education. As Hon. P. P. Claxton, the commissioner, was a member of the joint committee, it was possible to develop a plan for the study of rural school conditions in which all the forces interested could unite. During the spring of 1913, a field secretary employed by the joint committee made a careful statistical and photographic survey of about one hundred rural schools in four eastern states. At the same time Prof. F. B. Dresslar of the Peabody College for Teachers of Nashville, Tenn., special agent of the federal bureau of education, was collecting a large mass of material on country schoolhouses in different states. Additional material was secured from various sources, principally through state boards of health. All of this information has been carefully collated, with the result that Bulletin 12 of the United States Bureau of Education, entitled "Rural Schoolhouses and Grounds," contains in its two hundred pages probably more information on this subject than has ever before been collected. For the details of this survey, the large mass of illuminating facts brought out and general conclusions drawn therefrom, the reader is referred to the report itself, which can be secured from the Bureau of Education at Washington. As a result of this study, the joint committee of the National Education Association and the American Medical Association has prepared a statement of minimum requirements for rural schools, being a summary of those conditions of location, construction and equipment which are the very least that should be tolerated in rural schools. This pamphlet can be secured from the Bureau of Education at Washington, from Dr. Thomas D. Wood of Columbia University, New York, or from the American Medical Association. For the first time in the history of education and sanitation in this country, a reasonably comprehensive collection of facts regarding the sanitary condition of rural schools has been made and a standard of minimum sanitary requirements formulated. Parents, teachers, school boards, health officers and the general public have now been given a standard easily applied and within the physical and economic possibilities of any community. Adoption of this standard, says The Journal of the American Medical Association, is the very least that can with decency and fairness to its children be expected of any commu-

nity. As this standard becomes recognized through the distribution of these pamphlets, it will in a few years be possible to estimate the relative degree of development in any state by the condition of its rural schools. There are many other questions to be considered in solving the health problems in education, but persons interested in the sanitation of rural schools may feel gratified at the substantial and definite progress which has been made through the joint committee in the last three years in this field.

TO THE ALUMNI OF THE UNIVERSITY OF MARYLAND.

Dr. T. A. Ashby of the University of Maryland is organizing an Alumni Association of the University of Maryland for the State of Georgia. There are many graduates from this well known institution in Georgia. Dr. Ashby requests that as many of the alumni as possible attend the Macon meeting of the Medical Association of Georgia and that they organize at this time a State Alumni Association. Show your loyalty to your venerable and esteemed alma mater by attending this meeting and become one of the charter members of the proposed association.

NOTICE TO CLASS OF 1908, UNIVERSITY OF GEORGIA.

Several members of our class have requested a reunion this year, and this is to request every member of the class to meet in Macon, Ga., on Thursday, April 22, 1915.
G. G. LUNSFORD, President.

The more money The Journal of the Medical Association of Georgia makes out of its advertisements the less it costs the State Association to run the paper. This means that every member of the State Association has an interest in the advertising columns. If one business firm advertises and another does not, patronize the one that does. It is money in your pocket.

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CONTRIBUTIONS

EXCLUSIVE PUBLICATION: Articles are accepted for publication on condition that they are contributed solely to this journal.

CONTRIBUTIONS TYPEWRITTEN: Authors should have their contributions typewritten—double-space and with ample margin—before submitting them. The expense is small to the author—the satisfaction is great to the editor and printer. We cannot promise to return unused manuscript, but try to do so in every instance. Manuscript should not be rolled or folded.

ANONYMOUS CONTRIBUTIONS, whether for publication, for information, or in the way of criticism, are consigned to the wastebasket unread.

NEWS: Our readers are requested to send us items of news of a medical nature, also marked copies of local newspapers containing matters of interest to physicians. We shall be glad to know the name of the sender in every instance.

LAST CALL FOR DUES.

County Secretaries are required to file their annual reports with the State Secretary not later than March 31st. Until this time, the State Secretary does not know who has paid dues, and consequently everybody is, to all intents and purposes, in good standing. Following this date, every member whose name is not in the hands of the State Secretary as having paid for 1915, is suspended automatically. Membership cards are now being issued and any member not receiving same within a reasonable time after payment is made, should make inquiries of his county Secretary, and if need be, of the State Secretary.

There are many reasons why a member should remain in good standing and not permit himself to be suspended, of which we have spoken many times before. Our main purpose now is to induce compliance with the requirements of the by-laws.

WILL THE OPTOMETRISTS ASSUME TO PRACTICE MEDICINE IF LEGALIZED?

Most of the Optometry laws existing through the much heralded "thirty-three states" provide that optometrists shall not use the title of "Dr.," or do those things which will confuse the public minds as between the optician and the oculist. This is the argument that has caught a few unwary physicians and secured from them endorsement of the project. Physicians should give the matter more mature consideration before yielding to the importunities of their optometry friends. We have a decision from the present Attorney General, stating in no uncertain terms that the practice of optometry is the practice of medicine, and there is no doubt in the world but the higher courts will uphold any decision to that effect.

We believe that optometrists will, and are now doing so where the law exists, assume such titles as are forbidden, and will, in fact, claim the right to openly practice medicine wherever the eye is concerned, perhaps not in the matter of treating "sore eyes," but in holding themselves out as more qualified to handle abnormal eyes from the standpoint of refraction, than are the oculists. Let's see. The following quotations are from communications in The Optical Journal and Review:

"Having for my part received the degree of doctor of optics and doctor of optometry from the Philadelphia Optical College, I have been using my title for four years, and am still waiting for those who can prove by legal proceedings that it is an illegal title.

"Why is it that the University of Columbia does not give the degree of doctor? Most optometrists can guess why. Is it because certain oculists are afraid to see the science of optometry made the equal of the other sciences, such as law, medicine, dentistry and theology?" (December 24, 1914.)

And again:

"We have had other colleges conferring the doctor title on candidates of less preliminary education; for instance, all the pharmaceutical colleges granted in the past the title "Doctor of Pharmacy" to students with no preliminary education whatsoever.

"By using the title, we get distinction, confidence and respect from the public; therefore we can demand in this way better monetary remuneration, and thus we can afford to give them more time and better service." (December 3, 1914.)

And again:

"The public naturally addressing as Dr. professional men who give personal services of the kind we render. This attitude of the public, everywhere noted, is itself significant of the fact that title is appropriate for the men of our profession. The public is, after all, the court of last resort, in this as in other matters." (February 11, 1915.)

In the same number another correspondent advises that if an optometrist discovers a pathological condition requiring the service of a medical practitioner, in many cases the optometrist should proceed first to correct the refractive error, and then refer the patient to a general practitioner. The following is illuminating:

"Remember, the general practitioner frequently sends patients to you for a refractive test, but who ever heard of a ophthalmologist, or so-called oculist doing such a thing? It is to the general practitioner that you must look for patients, and he is the logical one to receive them from you when they need medical attention.

"The optometrists never should send a case to an oculist for refractive examination, unless there be no competent optometrists within call. If optometry is what we believe it to be, there never was a case of ametropia which could not be corrected by an optometrist, and if we find that we have been unable to give satisfaction, or that we are uncertain of our diagnosis in any case, what could be more reasonable than to turn it over to a colleague?"

And look at this:

"The right way to attack the problem is to work on the school authorities, privately, if possible, but publically if necessary. Possibly in states without optometry laws this would do no good, but the contrary is true in states with laws, for if the practice of optometry is legalized in a state, the educational authorities can be induced to prevent the favoring of medical against non-medical optometrists. Usually a presentation of the facts will cause them to order that notices which have stated 'Consult only an Oculist' be changed to read 'See a Specialist for your Eyes,' to which optometrists cannot object.

"In states having optometry laws there can be but one result; the educationists will be forced to grant non-favoritism in spite of oculist." (December 24, 1914.)

Another writer urges that physicians be made to stand an examination on refraction:

"When we have enough men of this type we can stop the influx of exemptions from the medical colleges. The law prescribes and limits the field of optometrists; why not make every medical man who wants to practice refraction undergo an examination? We cannot now ask this of the physician, since the great majority of our own men have not passed an examination, showing their special fitness to practice." (January 21, 1915.)

This is enough, and we must apologize to our readers for referring so extensively to the subject. The plans of the opposition have been so cunningly laid and so carefully worked out, that some of our members are being misled and they need to be reminded of the true situation.

It is unfortunate that we have to align ourselves in opposition to the efforts on the part of any class to better itself, and could we grant the right to practice medicine in any particular to such as these, we would certainly be in favor of the law they now advocate. This we cannot do, and while we welcome the world into the medical profes-

sion we must insist that we have none of it to scatter piecemeal and broadcast to those who would merely profit thereby.—Texas Medical Journal.

PAPERS PROMISED FOR ANNUAL MEETING, MACON, APRIL 21-22-23.

W. F. Westmoreland, Atlanta.

S. R. Roberts, Atlanta, "Tonsils and the Rheumatic Group."

R. P. Adams, Ashburn, "The Difference, as I See It, Between a Doctor and a Practitioner of Medicine."

George M. Niles, Atlanta, "Interpretation of Roentgenograms in Certain Gastrointestinal Conditions." (With lantern slide demonstrations.)

F. P. Calhoun, Atlanta, "Concerning the Removal of Foreign Bodies from the Globe by the Electro-Magnet."

E. G. Jones, Atlanta, Illustrated Subject.

A. G. Fort, Atlanta, "Final Report of Work Leading to Eradication of Hookworm in Georgia."

A. B. Mason, Waycross, "Legislation for the Prevention of Ophthalmia Neonatorum."

H. H. Martin, Savannah, "Injection of the Ganglion of Gasse Through the Foramen Ovale."

W. S. Goldsmith, Atlanta, "Autogenous Bone Grafts in Non-union and Malposition of Fractures of Long Bones."

A. L. Fowler, Atlanta, "The Small Fibrous Prostate, Its Causes; the Amount of Residual Urine It Occasions; the Reason Why It Is Overlooked so Frequently by the Examiner; Its Difficulty in Removal; the After Treatment."

J. R. Robins, Siloam, "The Country Doctor."

H. F. Harris, Atlanta, "Pellagrous Aecidosis."

H. R. Slack, LaGrange, "New Treatment of Burns, with Report of Cases."

W. Lapat, Savannah, "A Modification of the Sluder Method of Tonsil Enucleation."

G. Y. Massenburg, Macon, "Spinal Anesthesia in Surgery, with a Report of 927 Cases."

L. C. Fischer, Atlanta, "Syphilis of the Stomach."

Newton Craig, Atlanta. "Some Points in the Technique of the Submucous Resection of the Nasal Septum."

W. C. Lyle, Augusta, "Suggestions for Arousing and Maintaining Interest in County Medical Societies."

NEW AND NONOFFICIAL REMEDIES FOR 1915.

This publication is of such vital importance to the medical profession that we deem it necessary to make editorial announcement of its appearance. In this now quite considerable volume will be found a brief but sufficient reference to each of the new drugs and drug preparations that are worth while and in which the manufacturers have sufficient confidence to submit them to the scrutiny of the accredited representatives of the ethical medical profession—the A. M. A. Council on Pharmacy and Chemistry. There is a general index and an index to manufacturers. There is also a list of those preparations which have been refused admission, with reference to the issue of The Journal of the A. M. A., in which the criticisms of the Council appeared.

We say it without hesitation, no practicing physician can afford to be without this publication. It is sold by the American Medical Association, 535 North Dearborn Street, Chicago. Paper cover, 50 cents; cloth, \$1.00.

PATENT MEDICINE ACTIVITIES.

Turning the light into the noisome pit of charlatanism always stirs into squirming activity those who subsist, either as hosts or parasites, on such business. For nostrum exploiters champion that comfortable doctrine, "Let Us Alone"; they inscribe as their heraldic motto: "Laissez-faire." To the public unacquainted with The Journal's educational campaign of the past it might appear that the exposure of the Cattanooga concern was a veritable crusade into a new field. The amount of "fuss and feathers" displayed in this specific case is due to several causes—remote and proximate. The most important, probably, is the fact that the chief owner of the business is one of the most prominent and powerful laymen in the Methodist church. Of almost equal importance is the fact that the business has been, and still is, enormously profitable. * * * An interesting story could be written of some curi-

ous coincidences that have occurred since the company and its chief owner brought their suits. Articles appearing in the mouth-pieces of the "patent medicine" interests warning the public against the fell designs of the "Medical Trust" have been reprinted and widely circulated; nostrum-championing editorials of the "canned" variety have cropped out in those newspapers that may always be counted on to come to the defense of the "patent medicine" business; decoy letters have come to The Journal office from hypothetical "doctors," mailed from postoffice addresses in villages in which the writers apparently rented a postoffice box and to which they went in motor cars to get the "answers" that never came; detectives have posed as journalists seeking information about nostrums of the alcoholic-tonic type and have played the part of visitors to Chattanooga, solicitous (?) of the well-being of the new church organized after the split in the First Methodist Church of that city; attempts have been made to "work" stenographers; efforts have been put forth to learn in advance the dates of public talks to be given on the nostrum evil under the auspices of The Journal—these are but a few of the many things that have occurred. Whether any of these occurrences bear any relation to the suits or are wholly or partly inspired by the general "patent medicine" interests, or whether they are simple coincidences, we leave for our readers to decide.—Abstracted Editorial from The Journal A. M. A., Feb. 27, 1915.

Dr. W. C. Lyle,

Editor Journal Medical Association of Georgia,

Augusta, Ga.

Dear Doctor:

I am inclosing you a copy of our (The Emanuel County Medical Society) regulations, and if you see fit you can publish them in our Journal for the benefit of other counties that may get some ideas from them.

We have in our county organization about twenty-six members that are loyal and know how to stick together, and we have accomplished a good result, even considering the condition of the times.

Our main idea in these regulations has been to get all of the absolutely worthless, in other words, the dead beats, in a group together and to eliminate them from our practice either by forcing them to leave our

county or by forcing them to pay up, and by experience so far those that have been made to pay up have learned their lesson and have become good paying patients.

Our scheme is about as explained in the regulations, with this modification: Our society appoints a secretary to whom all the doctors send their lists and he gets them up in book form and send each doctor a book and once a month a report is sent to each doctor comprising additional names, to be added, or the ones who have paid to be removed. In addition every patient whose name is on this list is sent a form letter (personal) like the one inclosed. Then each doctor, as he is called on to attend these delinquents, informs him that he can only attend him for cash for thirty days, and it creates the desired effect.

The fairness of the inclosed cannot be questioned by any one who will study it closely, and as we doctors have for a long time been the goat for all who choose to ride us, it seems to me that it is our time to do a little riding now.

With best regards and hoping that this will be of some service to those who need it, I am, Fraternally yours,

JOHN B. CARTER.

REGULATIONS ADOPTED BY THE EMANUEL COUNTY MEDICAL SOCIETY.

Delinquent Registration Book.

The secretary shall keep a book in his office subject to the inspection of the members of this society which shall be known as the Delinquent Registration Book, upon which shall be recorded the name of each member of this association and immediately following the name of each physician will be written the names of all his delinquent patients. It is provided that the secretary shall receive ten cents for recording the name of each delinquent and fifteen cents for taking the name of any delinquent off. Same to be paid by physician furnishing list of names. The secretary is further required to furnish every member of the society a copy of this Delinquent Register Book.

2. Delinquent Fined.

A delinquent shall be known as anyone who is indebted to any member of this society and has made no satisfactory arrangement for the payment of same within twelve

months from date of service, also any person or persons who shall aid or assist any other person or persons in defrauding any member of this society out of his fees or bills due on account by shamming property or any other method not herein mentioned, shall be considered equally as delinquent as the party whom he has assisted or sided with in such defrauding.

3. Practice for Delinquents.

For the cash or satisfactory security any physician may practice for a delinquent thirty days, but no longer, unless the delinquent pays up and has his name erased from the Delinquent Register.

4. Warning.

A copy of these regulations, accompanying a bill for settlement to a debtor, shall be sufficient notice that unless his account is settled in full in thirty (30) days by satisfactory arrangements, his name will be placed upon the Delinquent Register.

5. Members Restricted.

Any member violating these rules shall be publicly expelled for a period of twelve months, will not be countenanced by the members of this association in consultation or recommended for medical examiner for life insurance companies, or shown any professional ethics whatsoever, and also subject to fine of fifty dollars, by a two-thirds vote of the members present at any regular meeting, provided a majority of the association is present at said meeting.

6. Right of Appeal.

Any one who thinks he has been unjustly placed on the Delinquent Register can write or confer with any doctor whose name appears below, state his case, and the Association will decide the matter.

7. Pledge.

We, the undersigned members of the Emanuel County Medical Society, agree to be governed by, support and enforce the above rules and regulations of the society.

An advertisement in The Journal of the Medical Association of Georgia will bring results. Rates sent on request.

Does your card appear in the Professional Directory?

THE ELEVENTH DISTRICT MEDICAL SOCIETY.

The eleventh semi-annual meeting of the Eleventh District Medical Society was called to order at Douglas, Ga., November 17, at 10 a. m., by the president, Dr. C. W. Roberts, when the following program was rendered:

Invocation by Rev. H. H. Shell, of the First Baptist church, Douglas, Ga.

Address of Welcome on behalf of the City of Douglas, by Mayor T. A. Wallace.

Address of Welcome on behalf of Coffee County Medical Society, by Dr. Quitman Holton.

Response to Address of Welcome, by Dr. Dallas Williams, Folkston, Ga.

President's Address, by Dr. C. W. Roberts, Douglas, Ga.

At this juncture the secretary, on motion, was instructed to have the president's address filed with the society papers and published in the minutes.

Scientific Papers.

"The Examining Physician's Relation to the Insurance Company, Its Agent, and the Applicant," Dr. J. W. Simmons, Brunswick, Ga.

Discussion by Drs. Dallas Williams, G. L. Touchton, Q. Holton, H. C. Wheelchel, S. L. Vinson, and B. H. Minchew.

"Why I Want to Be a Doctor," Dr. H. P. Smith, Pearson, Ga.

Discussions by Drs. Corbett, Wheelchel, J. M. Smith, Q. Holton, G. L. Touchton, S. L. Vinson, and B. H. Minchew.

"The Care of the Newborn, and Infant Feeding," Dr. Dallas Williams, Folkston, Ga.

Discussions by Drs. Simmons, Touchton, Wheelchel, Vinson, and Minchew.

"Adenoid Tissue; Its Relation to the Middle Ear; Consequences," Dr. Minchew, Waycross, Ga.

Discussions by Drs. Quitman Holton and J. M. Smith.

"Report of a Case of Vincent's Angina," Dr. J. M. Smith, Valdosta, Ga.

Discussion by Drs. J. T. Colvin, Wheelchel, Simmons, A. G. Fort, H. C. McCrackin, Minchew, Ray Harper, Touchton, and Vinson.

"Inflammatory Affections of the Nasal Mucosa and Accessory Sinuses in Children From the Viewpoint of the General Practitioner," Dr. H. C. Wheelchel, Douglas, Ga.

Discussion by Drs. J. M. Smith, Ray Harper, and Minchew.

The privilege of the floor was extended to Dr. G. A. Fort, field sanitarian of the State Board of Health, who gave an interesting report on the results of the campaign for the eradication of hookworm disease and allied parasit affection contracted from night soil, together with a resume of legislation accomplished in the interest of public health.

Privilege of the floor was extended to Mr. W. S. Coleman, of the United States Census Bureau at Washington, who spoke interestingly of the new vital statistics law and the necessity for the co-operation of the physicians in the enforcement of the recently adopted law in Georgia.

At the afternoon session, which convened at 2:30 o'clock, the business portion of the proceedings was taken up.

The minutes of the tenth semi-annual session were read and adopted.

Resolutions on the death of Dr. M. M. Johnson of Waycross, prepared by a committee appointed for that purpose at the preceding meeting, were read and ordered spread on the minutes.

Resolutions regarding the practice of charlatans, etc., in violation of the Medical Practice Act, were introduced and adopted.

The by-laws of the society were amended by the addition of the following section to Chapter I, viz:

"Chapter I. Section 4. The presiding officer of the Medical Association of Georgia shall be an honorary member of this society, with the privileges of the floor, at its meetings at all times, during his term of office as such."

The committee appointed to consider the advisability of changing the place of the mid-summer meeting made no report, and this matter was discussed at length by the members. A motion was made and carried that a committee consisting of the president, the secretary-treasurer, and one other physician member residing in Brunswick, be appointed to make all arrangements for meeting on St. Simon's Island, and to report said arrangements to the program committee by February 1st.

Dr. B. H. Minchew of Waycross reported the deaths since last meeting of Drs. J. C. Rippard and Redding, of that city. A committee composed of Drs. B. H. Minchew, P. P. Lane and A. Fleming, all of Waycross, was appointed to draft suitable resolutions

on the death of these two members and present said resolutions at the next meeting of the society.

Dr. C. W. Roberts read a telegram from Dr. W. C. Lyle, secretary of the Medical Association of Georgia. This telegram requested a report of the proceedings of the society, and called attention to the fact that only members of the State Association are eligible to membership in District Societies. The latter declaration in the telegram invoked considerable discussion, finally resulting in a motion by Dr. Ray Harper, which was duly seconded and carried, that the incoming president and the secretary take up the matter of the constitution and by-laws with the Board of Councillors of the State Association, requesting their ruling in the premises.

- Election of officers resulted as follows:
President—Dr. J. M. Smith, Valdosta, Ga.
Vice-President—Dr. B. H. Minchew, Waycross, Ga.
Secretary-Treasurer—Dr. J. W. Simmons, Councilor (to succeed Dr. J. G. Tuten, whose term expires at this session)—Dr. J. T. Colvin, Jesup, Ga.

No further business appearing, the meeting adjourned until Tuesday, June 15, 1915. The society was treated to an elegant banquet at the new Douglas hotel as guests of the Coffee County Medical Society, where a fine spread, beautiful orchestra music, and interesting addresses brought to a close one of the most delightful sessions of the Eleventh District Medical Society.

J. W. SIMMONS, Sec'y-Treas.
Attest: Dr. C. W. ROBERTS, Pres.

Whereas, it is a lamentable fact that there are within the Eleventh district, and all over Georgia, numerous quacks, so-called Christian Scientists, faith healers, etc., practicing their various and nefarious schemes and devices, claiming them to heal disease, and thus preying upon the health, happiness and pocketbooks of ignorant people, of whom there are surprisingly many; and
Whereas, the Medical Association of Georgia has been active in its efforts to eliminate these charlatans, and in their efforts succeeded in getting upon the statute books the Medical Practice Bill, which is ample authority for elimination; and
Whereas, because of the carelessness or inefficiency of our officials, courts and juries, no one, so far as we are advised, has yet been

dealt with in the Eleventh district; therefore be it

Resolved, That we, the Eleventh District Medical Society, in convention assembled, do hereby urge upon the judges of our superior courts to give in a special charge to the grand jury at each term of court the Medical Practice Act and insist that they emphasize to the jury the dangers to health and even the life of the victims of these people, as well as its effect upon society and the pockets of these ignorant and unsuspecting victims; and be it further

Resolved, That we urge that, in case of conviction of any of these charlatans, they be given chain gang sentences, as it is evident that small fines would not deter them from their further operations; and be it further

Resolved, That these resolutions be spread upon our minutes and that a copy be sent to each judge of superior, city or county court in this district.

NEW MEMBERS

February.

N. H. Lozier.....	Warthen, Washington
P. C. Simmons.....	Arlington, Tri
W. O. Sheppard.....	Blakely, R. 4, Tri
H. A. Jones.....	Millen, Jenkins
M. E. Perkins.....	Millen, Jenkins
T. H. Green, Natchez Hosp.....	Natchez, Miss.
Leo Reich	Augusta, Richmond
W. A. Herrington.....	Vidalia, Toombs
S. T. R. Revell.....	Louisville, Jefferson
Jas. L. McKenzie.....	Pittsburg, Walker
W. H. Clark.....	LaGrange, Troup
W. W. Rutland.....	LaGrange, Troup
J. E. Lane.....	LaGrange, Troup

March.

R. H. Allen, Grant Bldg.....	Atlanta, Fulton
Howard Bucknell, Candler Bldg.....	Atlanta, Fulton
Charles P. Cipolla.....	Atlanta, Fulton
O. O. Fanning, The Grand.....	Atlanta, Fulton
T. J. Anderson.....	Dallas, Paulding
George Ragsdale	Hiram, Paulding
E. M. Stokes.....	Jakin, Tri
W. H. Whittendale.....	Denton, Altamaha
J. M. Christian.....	Hazlehurst, Altamaha
G. B. Thomason.....	Hazlehurst, Altamaha
A. M. Davis.....	Warrenton, Warren
E. K. Lazenby.....	Camak, Warren
C. H. Haralson, Grand Bldg.....	Macon, Bibb
D. D. Walker, 370 1/2 Second St.....	Macon, Bibb

G. Y. Massenburg, Ga. Casualty Bldg.

Maeon, Bibb

B. F. Smith.....Elberton, Elbert

G. M. Ward.....R.F.D., Elberton, Elbert

T. H. Gaines.....R.F.D., Elberton, Elbert

F. L. Adams.....R.F.D., Elberton, Elbert

Dewitt T. Payne

R.F.D., Danielsville, Madison

E. V. Bailey, Empire Bldg.....Atlanta, Fulton

H. W. S. Hayes, The Grand.....Atlanta, Fulton

E. B. Thomas, Hurt Bldg.....Atlanta, Fulton

R. R. Holt.....Eatonton, Putnam

H. E. Ellis.....McDonough, Newton

J. W. Payne.....R.F.D., Covington, Newton

J. C. Loveless.....Porterdale, Newton

T. S. Hollyman.....Covington, Newton

E. A. Chance.....Garfield, Emanuel

A. C. Johnson.....Garfield, Emanuel

B. F. Johnson.....Garfield, Emanuel

L. P. Youmans.....Swainsboro, Emanuel

R. L. May.....Quitman, Brooks

A NEW DEPARTURE IN MEDICAL LICENSURE.

The unsatisfactory results of the conventional methods for drafting laws for the regulation of the practice of medicine have been generally admitted. In many states, the introduction of bills providing for separate boards and different standards for each new and fantastic sect or cult has become an expected feature of every session of the legislature. Yet the growth of knowledge regarding preventable diseases, and the increasing appreciation on the part of the public of the importance of state efforts for the conservation of life, are developing an appreciation of the importance of regulating equitably and permanently the licensing by the state of those who desire to treat the sick for compensation.

As an executive and as a member of both houses of the state legislature for many years, Hon. George H. Hodges, Governor of Kansas for the last two years, has had an extensive opportunity for consideration of this question. Realizing the unsatisfactory condition of the practice laws in most of the states, the governor appointed a commission to consider the entire question and to draw up and recommend for a passage a bill providing a single standard for all persons desiring to treat the sick, regardless of the school of practice to which they might belong. On this commission were appointed Dr. J. A. Milligan of Garnett, formerly a member of

the state senate; Dr. J. E. Sawtell of Kansas City; Prof. W. L. Burdick of Lawrence, dean of the law school of the state university; Hon. Fred D. Smith of Hutchinson, formerly speaker of the House of Representatives, and Mr. F. T. Ranson of Wichita, president of the Stock Yards National bank. This commission has drafted a bill providing for a preliminary examination of all persons desiring to practice medicine, surgery or any other form of healing art. The bill provides for a board of preliminary examination, made up of the chancellor of the state university, the president of the state agricultural college and the president of the state normal school, ex officio, who shall examine all persons desiring to treat the sick in any way. Any person seeking a license from the state medical board, the board of osteopathy, the board of chiropractic or any other board must first satisfy the board of preliminary examination that he has had a four years' course in some reputable or established high school or its equivalent, and has spent at least four years of at least eight months each at some reputable professional school which includes in its course anatomy, physiology, pathology, surgery, obstetrics, chemistry, bacteriology, symptomatology, diagnosis, urinalysis, hygiene and sanitation. Suitable sections for the administration and enforcement of the act are included, together with sections amending the medical practice, osteopathic and chiropractic laws so as to make them uniform with the proposed bill.

Medical practice acts, says The Journal of the American Medical Association, are primarily and solely for the good of the public. The report of this commission marks an epoch in medical legislation. It is the first distinct recognition of two important principles which must sooner or later dominate such legislation in all of our states. The first is the necessity and equity of a single standard for all persons, regardless of "schools," and by inference, the iniquity of different standards for different schools. The second and equally important principle is that the examination and licensing of persons desiring to treat the sick for compensation is not a medical but an educational problem. The recognition of this fact in the designation of the three leading educational authorities of the state as the board of preliminary examination is a most important step in the development of better conditions in state regulation of the practice of medicine.

HEALTH BOARDS AND THE TAXPAYER

Appropriations for health purposes in many communities have in the past been granted reluctantly, and in most instances in insufficient amounts for effective work. It has been difficult to convince the taxpayer and the public official that there would be an adequate return for money expended. Health to them has seemed an individual matter, and health boards have been compelled to beg for every dollar. An improvement, however, is taking place, and the amount per capita of health appropriations is increasing. A more intelligent understanding of the objects of public health expenditures and of the returns to be had is developing. In some instances the taxpayer is now on the other side of the proposition. He demands of the health board, having approved liberal appropriations, that it prevent epidemics which endanger the health and lives of himself, his family and his friends. Spartanburg, S. C., has been for several years a center for the study of pellagra by a scientific commission. This has no doubt promoted the study of health matters in general in that community, with the result that the local health service has been well supported, while the people have come to recognize the possibilities of disease prevention. With the idea in mind of the seasonal recurrence of certain infectious diseases, the Spartanburg Herald says:

"For the amount of money the citizens of Spartanburg are putting up these days for the public health department they have reason to expect service and results. . . . Just at this season of the year and a little later on, in February and March, most cities are visited by . . . scattering cases of diphtheria and epidemics of measles and whooping-cough. Measles and whooping-cough usually spread until they have exhausted the supply of youngsters who have come on since the last year's epidemic, while diphtheria, because of its more violent character, is usually held in check. But the question in our mind is whether these things have to be. In modern days is there no way to prevent so much suffering and sickness on the part of the little children of a city? The Spartanburg health authorities could in no way carry their services nearer the homes of the people than by making a study of this question and taking every precaution pos-

sible to hold these things in check this year."

It goes without saying that the health board of Spartanburg will do its utmost, but this change of attitude of the taxpayer toward disease prevention is interesting and hopeful, says The Journal of the American Medical Association. It also emphasizes the obligation on the part of health departments to make good.

PROPAGANDA FOR REFORM.

Celerina, *Aletris Cordial* and *Kennedy's Pinus Canadensis*, *Light* and *Dark*.—As glaring instances of nostrum exploited to physicians on unscientific claims and false representations the Council and Pharmacy and Chemistry has prepared reports on the products of the Rio Chemical company, namely, *Celerina*, *Aletris Cordial*, *Kennedy's Pinus Canadensis*, *Light* or *Abican*, and *Kennedy's Pinus Canadensis*, *Dark* or *Darpin*.

In addition to 42 per cent of alcohol *Celerina* is stated to contain kola, viburnum, celery, cypripedium, xanthoxylum and aromatics. There is no ingredient in *Celerina*, except the alcohol, that has any recognizable activity and the alcohol content is nearly as great as that of whisky. The sooner it is realized that this preparation is essentially nothing but alcohol and bitters exploited under a fancy name, the better for the science of medicine and the public health.

In addition to 28 per cent of alcohol, *Aletris Cordial* is stated to contain *aletris*, *helonias* and *scrophularia*. These drugs have been discarded as valueless by modern scientific medicine. In *Aletris Cordial* there is no ingredient capable of producing any other effect than the alcohol stimulation and such psychic effect as may be due to the bitter taste. Yet physicians are asked to believe that "probably no remedy is so uniformly successful in the prevention of threatened miscarriage as *Aletris Cordial*, *Rio*." Alcohol being the essential constituent of *Aletris Cordial* and the amount being high enough to promote the formation of the alcohol habit, the recommendation to administer it during pregnancy and to young girls is dangerous and an outrage.

Kennedy's Pinus Canadensis, *Dark*, recently renamed "*Darpin*," and *Kennedy's Pinus Canadensis*, *Light*, recently renamed "*Abican*," are of interest chiefly because of the unwarranted claims which are made for them. The "*dark*" preparation appears to be some sort of a tannin-bearing extract. The "*light*" preparation appears to be a sulphate of zinc-alum injection. It is devoid of tannin and is not an extract of *pinus canadensis* as claimed. A discussion of the claims made for these preparations is superfluous. It is enough to mention that they are recommended in such diseases as albuminuria, fetid perspiration, gonorrhea, uterine hemorrhage and leucorrhea. (Journal A. M. R., Feb. 13, 1915, p. 606.)

Tri-Iodides, *Three Chlorides* and *Maizo-Lithium*.—As an illustration of unreliability of claims and unscientific character of proprietary mixtures the Council on Pharmacy and Chemistry published reports on *Tri-Iodides*, *Three Chlorides* and *Maizo-Lithium*, products of the Henry Pharmaceutical Company (J. F. Ballard, proprietor).

The A. M. A. Chemical Laboratory reported to the Council that contradictory and false claims were

made in regard to the composition of Tri-Iodides (Henry). The Council held that Tri-Iodides conflicted with its rules in that the composition was incorrectly stated, because it was advertised indirectly to the public, because unwarranted therapeutic claims were made for it, because the name did not indicate the potent ingredients and because the mixture was unscientific.

Three Chlorides was claimed to contain mercuric chloride, arsenic chloride and ferrous chloride (protochloride of iron). The A. M. A. Chemical Laboratory reported to the council that, while the advertising matter laid much stress on the superiority of the protochloride of iron which was stated to be present, the iron was not in the ferrous but in the ferric condition. The Council held Three Chlorides in conflict with its rules in that its composition was not correctly stated in that it was advertised indirectly to the public for the treatment of diseases with the likelihood of doing harm, in that exaggerated and unwarranted therapeutic claims were made for the preparation, in that the name of this mixture did not indicate the presence of its potent constituents, iron, mercury and arsenic, and in that the routine administration of mercury and arsenic with iron in fixed combination is irrational.

Maizo-lithium is one of the many proprietary lithium preparations based on the disproved theory that lithium dissolves uric acid deposits in the body. While claimed to contain "maizenate of lithium," the Association's chemists reported to the Council that they questioned the existence of such a compound, that the manufacturer had failed to submit evidence of its presence in his preparation and that chemical analysis indicated the presence of lithium citrate, instead. The Council held Maizo-Lithium in conflict with its rules in that its composition was not disclosed, in that it was advertised indirectly to the public, and in that unwarranted therapeutic claims were made for it. (Journal A. M. A., Feb. 5, 1915, p. 528.)

Purity of Ether and Postanesthetic Glycosuria.—Animal experiments by Ross and Hawk show that postanesthetic glycosuria is not due to impurities as has been claimed, but is brought about by a carbohydrate free diet prior to the anesthesia. Those who claim that the U. S. P. tests for the purity of ether are insufficient, should present better evidence than they have so far done. (Journal A. M. A., Feb. 20, 1915, p. 668.)

Cod Liver Oil vs. Milk, Butter and Eggs.—Like other fats, cod liver oil is readily digested and utilized in the body. Its disagreeable taste has largely outweighed its availability as a nutrient. Recent experiments have established that the peculiar growth promoting qualities of cod liver oil are likewise possessed by butter and egg-yolk fat. There seems to be no reason, therefore, to administer the unpalatable cod liver oil. (Journal A. M. A., February 20, 1915, p. 667.)

Cod Liver Oil Cordials.—To determine if the growth promoting principle of cod liver oil is contained in the oilless cod liver oil preparations on the market, feeding experiments have been made with some of these preparations by J. P. Street of the Connecticut Experiment Station. In these experiments it was found that the normal nutrition and growth of rats was not maintained when the fat of a standard ration was replaced by a representative amount of Hagee's Cordial of the Extract of Cod Liver Oil Compound, Vinol, Wampole's Perfected and Tasteless Preparation of an Extract of Cod Liver, and Waterbury's Compound, Plain. When, then, these animals were placed on a ration

containing an equivalent amount of cod liver oil, normal nutrition and growth was soon established. (Journal A. M. A., Feb. 20, 1915, p. 638.)

Towns' Epilepsy Treatment.—This is a bromid mixture marketed by the Towns' Remedy Company, Milwaukee, Wis. It was found by the A. M. A. Chemical Laboratory to contain the equivalent of 21.3 grs. of potassium bromid and 0.78 gr. of potassium iodid per dose (one and one-half teaspoonfuls). (Journal A. M. A., Feb. 20, 1915, p. 683.)

Virol.—The Council on Pharmacy and Chemistry voted to refuse recognition to Virol (sold by the Etna Chemical Company in the United States) because the claims made for it were unsubstantial and unwarranted. A referee who analyzed Virol concluded that it was an extract of malt, with fat and a small amount of protein. He held that Virol could not be considered a "complete food" as claimed, nor an ideal food for infants. (Journal A. M. A., Feb. 20, 1915, p. 683.)

Salesthyll and Sal-Hyl.—Salesthyll, a liquid marketed in capsules, is stated to be the menthyl ester of menthyl salicylate. Sal-Hyl is stated to be an ointment of Salesthyll, but the exact composition is not disclosed. Salesthyll was submitted to the Council on Pharmacy and Chemistry with the claim that it had the properties of salicylates, but to be more efficient. The evidence to substantiate the therapeutic claims was found to be inconclusive and untrustworthy. Being similar to "sal-ethyl," described in N. N. R., the name Sales-thyl was held objectionable. The Council refused recognition to these preparations. (Journal A. M. A., Feb. 20, 1915, p. 684.)

Analutos.—Analutos is a name applied to calcium acetylsalicylate. The Council on Pharmacy and Chemistry refused recognition to Analutos because it was held not to have any advantages over acetylsalicylic acid. In view of this, it was held that medicine shall not be burdened with this non-descriptive name. (Journal A. M. A., Feb. 20, 1915, p. 684.)

Budwell's Emulsion.—Budwell's Emulsion No. 1 is stated to contain cod liver oil, "Iodide of Arsenic," "Iodide of Calcium," and "Iodide of Manganese." Budwell's Emulsion No. 2 is claimed to contain the ingredients of the first and also creosote carbonate and guaiacol. The Council on Pharmacy and Chemistry refused recognition to these preparations because the exploitation made likely their use as "consumption cures" and because they are irrational shotgun mixtures. (Journal A. M. A., Feb. 20, 1915, p. 684.)

Citarin.—Citarin was admitted to New and Non-official Remedies in 1906. The Council of Pharmacy and Chemistry held that experience had failed to demonstrate the value of Citarin as a uric acid solvent and hence directed the omission of it from New and Nonofficial Remedies. (Journal A. M. A., February 20, 1915, p. 685.)

Neurosine, Dioivurnia, Germiletum and Palpebrine.—The Council on Pharmacy and Chemistry reports on Neurosine, Dioivurnia, Germiletum and Palpebrine, shotgun proprietaries typical of the polypharmacy of past decades, put out by the Dios Chemical Company, St. Louis.

Neurosine is said to contain in each fluid ounce, "Bromid of potassium, C. P. 40 grains; Bromid of sodium, C. P. 40 grains; Bromid of ammonium, C. P. 40 grains; Bromid of zinc, 1 grain; Extract Lupulin, 32 grains; Caseara sagrada, fl. ex. 40 minims; Extract Henbane, .075 grain; Extract Belladonna, .075 grain; Extract Cannabis Indica, .60 grain; Oil Bitter Almonds, .060 grain; Aromatic Elixirs." No

physician would think of prescribing all of the drugs in Neurosine for any one condition. The Dios Company urges the use of this nostrum for a host of conditions and without due consideration of its potent constituents. Not content with recommending the promiscuous use of this already too complex mixture, the Dios Company advises physicians to combine it with other drugs.

Germiletum is a member of a large class of alkaline antiseptics with excessively complex formulas. The formulas on different styles of Germiletum labels and circulars vary so much that one cannot tell what composition the exploiters of it intend to claim for their nostrum. Germiletum is recommended in many conditions and in a way to lead the physician to place false confidence in it.

According to the label, every fluid ounce of Dioviurnia contains "3i dr. each of the fl. extracts, Viburnum Prunifolium, Viburnum Opulus, Dioscorea Villosa, Aletris Farinosa, Helonias Dioica, Mitchellia (sic) Repens, Caulophyllum Thactioides, Scutellaria Laterifolia." The label also declares that Dioviurnia contains 18 per cent of alcohol. As the named fluid extracts in the quantities given require a much larger content of alcohol in Dioviurnia, either the alcohol statement or the formula is incorrect. This complex preparation of drugs generally considered worthless is recommended by extravagant and unwarranted claims for a large number of widely differing female disorders. In a way the Dios Company seems to recognize the inefficiency of Dioviurnia, for it frequently suggests that it be used in combination with drugs of known value.

Palpebrine is claimed to be a solution of stated amount of morphine sulphate, zinc sulphate, mercuric chloride, boric acid and salicylic acid. It is termed "A Reliable External Ocular Antiseptic." It is asserted that "With the assistance of Palpebrine the general practitioner can successfully treat all cases of external eye disease ordinarily encountered in his practice." Even more dangerous is the recommendation of Palpebrine for the prevention of ophthalmia in the newborn. (Journal A. M. A., Jan. 9, 1915, p. 165.)

Hayden's Viburnum Compound.—This preparation, according to the advertising matter, depends for its action on Viburnum opulus, Dioscorea villosa and aromatics. The label admits the presence of 50 per cent alcohol. Its use is advised in the treatment of female disorders, cramps, etc. A report of the Council on Pharmacy and Chemistry states that, even if it contains the ingredients claimed (it has been reported that Viburnum opulus has not been on the market for years), the therapeutic action of the preparation depends almost entirely on the alcohol which it contains. The Council fears that the use of this preparation may initiate the alcohol habit in girls and women, and publishes its report as a protest against its use. (Journal A. M. A., January 23, 1915, p. 359.)

Peebles Epilepsy Cure.—The Dr. Peebles Institute of Health, Ltd., Battle Creek, Mich., advertises an "epilepsy cure." The "treatment" was examined in the A. M. A. Chemical Laboratory. It consisted of two bottles, "No. 1" and "No. 2." "No. 1" was a liquid containing extractive matter, had an odor resembling celery and valerian, and contained 11.40 per cent absolute alcohol. "No. 2" was a liquid, having a valerian-like odor and containing as essential constituents ammonium bromide and potassium bromide, equivalent to 16.8 gr. potassium bromide per fluid dram, the recommended dose. Thus the treatment consists essentially of bromides and is, in no sense, a cure and not free from danger. (Journal A. M. A., January 30, 1915, p. 455.)

Radio-Rem.—The Radio-Rem outfit is advertised by Schieffelin & Co. It is said to produce water charged with radium emanation by inserting rods stated to be coated with radium sulphate in water. Not only is the internal use of radium emanation without proved value, but the amount of emanation said to be produced by the apparatus is far below the amounts generally used by those who believe in its efficacy. It is claimed that this outfit supplies a substitute for natural mineral waters; but there is no proof that the value of mineral waters depends on contained radium emanation. (Journal A. M. A., January 30, 1915, p. 456.)

G. G. Phenoleum Disinfectant.—This is a disinfecting solution sold by the G. G. Phenoleum Company, New York. It was found ineligible for New and Nonofficial Remedies by the Council on Pharmacy and Chemistry because unwarranted claims were made for it and because the disinfectant power was not stated on the label, as required by the Council. (Journal A. M. A., January 30, 1915, page 456.)

Phytin and Fortossan.—Phytin, sold by A. Klipstein & Co., New York, is an organic phosphorus compound, the acid calcium-magnesium salt of phytinic acid. The Council on Pharmacy and Chemistry rejected Phytin because unwarranted and exaggerated therapeutic claims were made for this product, based on the entirely undemonstrated assumption that phosphorus is assimilated only from organic combination, that a long list of diseases are due to deranged phosphorus metabolism and that such diseases are benefited or cured by Phytin. The Council also refused recognition to Fortossan, a preparation of Phytin and sugar of milk. (Journal A. M. A., January 30, 1915, page 456.)

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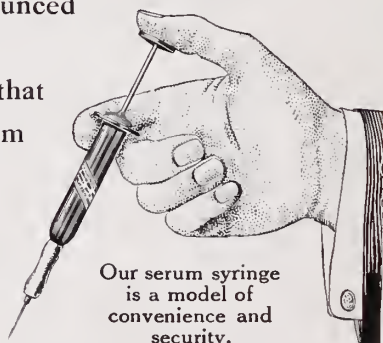
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SYPHILIS.*

By Montague L. Boyd, M.D., Atlanta, Ga.

Syphilis is without doubt a disease little known to the general public, and with which we, generally speaking, of the medical profession are just becoming thoroughly acquainted. Never before the present day has this one of the three so-called great scourges of humanity—alcoholism and tuberculosis being the other two—been brought to such extensive publicity. The terms anti-tuberculosis and prohibition are widespread, reaching even to the distantly removed rural resident, but I will venture to state that no one of you has ever heard of an active crusade against the spread of syphilis.

The reason for the now rapidly widening knowledge concerning this really fearful disease is due on the one hand to the more general knowledge of the public on medical subjects which is obtained largely from the popular magazines and newspapers, and on the other hand to the remarkable pieces of work done within the past seven years by Schaudinn, Wassermann and Ehrlich. The

first two of these have been the discoverers of methods of diagnosing the disease, and the last has through long, consistent and brilliant research brought forth an almost certain cure for a large number of those who have contracted the disease.

We are still ignorant concerning the origin of syphilis. It has existed in Japan, according to Dr. Albert Ashmead,¹ for from 1,500 to 3,000 years, and most probably a similar length of time in China. Although there is no absolute proof that the disease existed in America before the arrival of Columbus at San Salvador in 1492, it is most probable from all evidence which has been brought forward that it was here a long time before then. It seems almost certain that it was carried back to Europe by the soldiers of Columbus who on their return landed first at Palos, near Seville, and then proceeded to Barcelona. Shortly after that time the whole of Europe and part of Asia were swept by a great epidemic of syphilis which has not yet been definitely demonstrated to have existed there before then. The wide and rapid spread of the disease at this time is accounted for by the fact that the soldiers of Columbus were sent into Italy where they

*Read at meeting of Medical Association of Georgia, Atlanta, Ga., 1914.

mingled freely with the inhabitants of that country and with the French soldiers who were then there.

The disease soon became known by a number of different names, some of which attempted to describe its characteristics, some of the dreadful results which it produced, and others the source from which it came or seemed to come. It remained for Hieronymus Fracastorius,² a physician of Verona, to give to it the name of syphilis by which it is now most generally known. In 1530 he published a poem in which a herdsman named Syphilis was afflicted with some mysterious malady by the God Apollo for having given divine honors to the king. The word is derived from the Greek words "hog" and "loving," and was intended in no reproachful sense to suggest that the hero was a simple companion of the swine.

Since the great epidemic in the last part of the fifteenth century (in 1495) syphilis has been recognized as a contagious disease and in 1778 John Hunter verified this belief by experiment. Before Schaudinn discovered the organism which really does cause the disease a great number of organisms had been brought forward by different observers who claimed that they were the specific organisms. Swedian in 1819 suggested that the contagious substance was a ferment, spreading through the lymphatic system. In 1837 Donne made the first bacteriological research of syphilitic ulcerations and demonstrated the presence of a spirilla, vibrio lineola, in them, which he believed to be the causative factor. Klebs in 1879 described cocci and short thick bacilli which he claimed that he had cultivated, he also described a spiral form of organism which he named helicomonades, and said could be made to produce syphilitic lesions in animals. Lustgarten in 1884 discovered a bacillus which somewhat resembled the tubercle bacillus and was found in syphilitic tissues, chancres, papules, enlarged glands, and gummata. Lustgarten's findings were confirmed by Dutrepoint and Giacomi.

Many other investigators found these same or similar bacilli in various syphilitic lesions, but not constantly and always in small numbers. It was, however, generally agreed before the discovery of Schaudinn that the organism of syphilis had not been found in spite of the contentions of the various investigators to the contrary.

The disease existed in Europe then for

about 410 years, before the organism which caused it was found, and sixty-eight years after the first bacteriological research of syphilitic lesions was made. The difficulty in finding the organism was due largely to the fact that it is a spirillum which is extremely delicate, takes stains very poorly, and is grown with great difficulty. It has been named the *treponema pallidum*.

Syphilis is a disease which requires for its transmission the contact of the *treponema pallidum* with some abraded skin surface or with mucous membrane, such as parts of the mouth and genital tract possesses. The time which it takes the initial lesion, which is a local sore, to develop after the implantation of the organism, is usually about three to five weeks, but may be several weeks longer. Shortly after the development of the sore the neighboring lymph glands begin to swell. This constitutes the primary or first stage of the disease which is divided, generally speaking, into three stages. The organisms are apparently not immediately diffused through the system, but remain localised at the site of the sore for about three weeks or more. As the general systemic invasion advances a fever appears, accompanied by malaise, and at about the sixth week or shortly after the fever, we begin to see the first evidence of the skin eruption which now appears and which belongs to the secondary stage. The other symptoms of the secondary stage, which are most often present, are ulcers in the mouth (on the tonsils, soft palate, and tongue), or in the throat, and which may exist without any great feeling of soreness. Soft wart-like patches, called condylomata, may occur in any of the moist parts of the body, such as the mouth, the genitalia and between the thighs. During this period the brain, spinal cord, the covering of the bones, and the bones themselves, and in fact all the tissues of the body are more or less affected by the organisms which are disseminated everywhere by the blood and lymph. These lesions are usually slight and transitory at this stage, but it is possible for them in certain cases to become severe, and lead to such serious things as loss of hearing or sight and many other troubles depending upon the part of the body affected. There are some cases in which the symptoms are so serious that the term malignant syphilis is used to describe them, extensive ulceration with severe emaciation occurs, followed very often by a rapid death.

The primary and secondary stages are usually sufficiently noticeable to demand treatment which rapidly clears them up as far as the symptoms are concerned. Where the treatment is undertaken early enough the secondary symptoms are very often absent entirely.

The symptoms of the third stage are usually well separated from those of the secondary stage, although in some cases the symptoms of the one may pass into those of the other without any definite cessation. The symptoms of the primary and secondary stages tend to disappear of themselves, being in this unlike those of the third stage which tend to grow worse unless medication is resorted to. It is just this quality of the secondary stage that has led to so many serious tertiary lesions, for the patients seeing no longer any signs of the disease have considered themselves well and stopped the treatment against the advice of the physician.

The most distinctive lesion of the tertiary stage is a soft swelling or tumor-elastic but ~~faint~~ firm, which is called a gumma and which may occur in any of the tissues of the body. The muscles, the skin, the brain, the coverings of the brain, the bones, and even the eyes may be the seat of these swellings and be destroyed by them if treatment is not undertaken. It is in this stage also that we find the symptoms which occur from a destruction of the nerves and cells in and about the brain and spinal cord with an often resulting paralysis or insanity. These are, as a rule, however, the longer delayed symptoms of the disease, and they vary somewhat with the occupation and habits of the individual as well as with the thoroughness of the treatment used and the virulence of the infecting organism. Some of these conditions of insanity and paralysis are so late, in fact, that they have been separated into a distinct group by some authors and called parasyphilitic manifestations. They may, however, occur quite early after the secondary symptoms, and I shall make no effort to separate them into a class by themselves.

Formerly we were doubtful about the cause of a number of cases of paralysis and insanity, called *tabes dorsalis* and general paralysis, but we have more recently, since the introduction of the Wassermann reaction, learned that 72 per cent of the cases of *tabes dorsalis* and about 95 per cent of the cases of general paralysis give positive syphilitic reactions. Likewise in a

number of other affections of the brain and spinal cord we are finding syphilis to be the cause of the trouble where we were before very uncertain. In 5,749 cases of syphilis³ in the third stage we find 1,857 of them with the lesions most marked in the brain and spinal cord, causing paralysis and insanity. Next comes the skin with 1,451 cases, and then the bones in 748 cases. The remaining 1,693 cases showed lesions in the various organs of the body, such as the muscles, intestinal tract, liver, etc.

The gravest part of this is that we seldom see those cases with affections of the brain and spinal cord early enough to cure them; we may arrest the progress of the disease and even cause some improvement in the symptoms, but we seldom cure them. This is due to the fact that once these parts of the brain and cord are destroyed they cannot be regrown or regenerated, nor can their work be carried on by other nerves and cells.

Let us turn now to a discussion of the value of the work done by the three men whom I have already mentioned, namely, Schaudinn, Wassermann and Ehrlich.

A correct diagnosis of almost any disease is always of great importance, or should be, naturally, to the individual himself, but how much more urgent is it that we make an accurate diagnosis of a disease like syphilis in which not only the community is interested on account of its contagiousness, but also posterity, because it is handed down to the next generation through diseased children who are born to syphilitic parents. Hence the importance of the discoveries of Schaudinn and Wassermann which have enabled us to diagnose those cases of syphilis which had hitherto escaped us or foiled our keenest investigation. Before the discovery of the *trepennoma pallidum* by Schaudinn in 1905 there was no way by which we could be absolutely sure that a sore was a primary syphilitic sore. It is true that we have known for many years the characteristics of a typical primary sore, but unfortunately only a certain percentage of these sores are sufficiently characteristic to enable us to be sure about them, and many syphilitic sores occur which are so atypical that we feel almost sure that they belong to an entirely different class. Formerly two courses were open to the physician who was confronted by one of these atypical sores and in either case the result was more or less unfortunate. He could either wait until the secondary symptoms

appeared or to treat every sore as though a definite diagnosis of syphilis had been made. By the first method the disease was allowed to gain a much firmer foothold, and thereby become harder to cure, as has been shown conclusively by recent investigation. By the second method many patients were treated for years and underwent privations and fears for a disease which they had never contracted.

Second in importance to the discovery of the *treponema pallidum* was the development of what is known as the serum test for syphilis by Wassermann in 1907. The serum is obtained from the blood by letting it clot or the red and white cells settle to the bottom to the vessel which leaves the white fluid part of the blood at the top, or the fluid, or serum, which surrounds the brain and spinal cord may be used. The blood may be easily obtained from any of the veins which are so easily seen beneath the skin by introducing a small hollow needle, or by simply puncturing the lobe of the ear or one of the fingers; the serum from the spinal canal is a little harder to reach, but with a little dexterity a needle is pushed between the bones and some of the fluid removed without danger.

The Wassermann test aids us in discovering whether syphilis is present anywhere in the body, no matter whether it is showing itself by any symptoms or not. The patient indeed may appear as sound as any one, but still have germs of the disease lying quiet in some of the organs which will eventually bestir themselves and do serious damage. It is in these cases that the test is of the most value to us. It, moreover, helps in the treatment of syphilitic cases by assisting us to know when we have completed a cure, or what we believe to be a cure—some cases relapse who apparently were once thought to be thoroughly well, they are rather uncommon, but serve to warn us against hasty conclusions and urge us to long continued inspection of our patients even after they are almost surely cured.

The extensive use of this test by numerous careful workers has shown that it is very delicate and shows even faint traces of the disease in the majority of cases. The introduction by Noguchi of his modification of the Wassermann reaction served to show that there were a certain number of cases of syphilis where the Wassermann did not give a positive test. This was possible be-

cause the Noguchi method shows a greater sensitiveness to syphilis than the Wassermann method. Still further the more recent introduction of the skin or "luetin" test by Noguchi has shown that there are cases of syphilis that respond to neither of the methods of performing the Wassermann, but give a positive reaction with the skin test. The luetin test has not yet been tried out sufficiently to make its use of value in general diagnosis except in connection with the Wassermann to show up, if possible, those cases which give a negative Wassermann but are nevertheless syphilitic.

Some cases that are not syphilitic give a positive Wassermann, and this has to be borne in mind when using the test. Positive tests, for example, have been found by some observers in cases of leprosy, malarial fever, scarlet fever, and a few cases of pneumonia, and also in relapsing fever and trypanomiasis. The tendency is, however, as Noguchi⁴ says, toward the belief that those tests which show a high percentage of positive Wassermann reactions in non-syphilitic conditions are not being done correctly.

Treatment.

As far as we are able to determine mercury has been used in the treatment of syphilis for hundreds of years in Japan and China. It was up to recently by far the most effective drug used, and was in reality the only one with which the symptoms and lesions could be controlled. Shortly after the epidemic of syphilis in Europe, of which I have spoken, its use was begun there, but it fell into disrepute with many on account of being misused—such large doses were given that it caused salivation with falling out of the teeth and emaciation, until the cure seemed almost worse than the disease. It was not until much more recently that it has been generally accepted as the one most efficient method of combating the disease, but the best method of administering it and the best form in which it should be used, as well as the length of time over which it should be given, is at present still a matter of discussion.

In 1908 Dr. Paul Ehrlich introduced to the profession the result of his long, brilliant and most elaborate research, having then produced a substance which is without doubt a rapid and effective cure for a large number of cases of syphilis, and of the greatest assistance to us in curing or relieving the

symptoms of the majority of the remaining ones. In chemical parlance it is dioxydiamido-arseno-benzene. The names by which it is most commonly known is Salvarsan and six hundred and six. A description of the more important points of Ehrlich's work would make a very interesting narrative, but we have not time to go into it tonight.

Salvarsan was at first accepted by the over-enthusiastic as a sure and rapid cure for all cases of syphilis. Without stopping to think one would be very much inclined to believe this if he but saw the remarkable way in which the most serious sores and ulcerations disappeared under its influence. I regret to say that this is not the case, and a number of cases have relapsed after they were apparently so surely cured. Many cases, though, have been completely cured by one or two doses of the drug, and others by a greater number in a comparatively short period of time, a month or two perhaps, which is seen to be a great blessing when we consider the fact that formerly a patient had to continue his medicine for two, three, or even six years.

The more readily cured cases are as a rule the ones caught in the earlier stages. When the first signs only of the disease are present one dose of salvarsan will often bring about an immediate cure, thus making an early diagnosis and immediate treatment extremely desirable.

The cases which are more difficult to cure are those where there are severe secondary or tertiary symptoms, and these may require a large number of doses. As I have explained, it is impossible to cure those who have already suffered destruction of the cells or nerve fibres of the brain, but such cases usually experience severe pains which are very often quickly relieved by salvarsan.

The less conservative were at first inclined to give up the use of mercury entirely and use the salvarsan alone, but careful work has shown here again that they were too enthusiastic over the properties of the new discovery and that mercury was of considerable assistance to the salvarsan in bringing about a cure. It is now used by the majority of physicians between and following the separate injections of the salvarsan.

The ill effects obtained by the use of salvarsan have been rare in the hands of careful men. A very few deaths have been reported, some serious paralyses, a few cases of blindness, and some cases of temporary disability. I am inclined to believe that

many of the bad results are due to faulty technique in the preparation of the solution to be given. It is only by the use of the most rigid care that a proper solution of salvarsan can be prepared. The printed instructions must be followed most strictly concerning the temperature of the diluents used, as well as their purity and character. I feel sure that it is through this care that I have obtained the good results that I have had in my own cases. In the last fifty administrations of salvarsan I had only two cases followed by vomiting and only seven in whom there was any uncomfortable nausea, and I have never yet had any of the more serious results, such as have been reported.

Within the last year Dr. Ehrlich has produced a new preparation very similar to salvarsan, which is equally efficacious, very much simpler in its preparation has less toxic effect on the patient, and therefore may be given in larger doses. It is being almost generally used now to replace the salvarsan.

The technique of the administration of a solution of either of these two is really quite simple. The intravenous injections are the best. A needle is plunged directly through the skin into a superficial vein, and if a syringe is used for the injection so small a needle may be employed that almost any size vein may be readily entered. The kind of apparatus is therefore of more importance than the elaborate technique employed by some to avoid cutting through the skin to get to the vein. By the use of a very small needle I have entered directly the small veins at the wrist which are often prominent even in quite stout women.

In a discussion of the prophylaxis of syphilis there are two principal points that will interest us. First the various methods of transmission of the disease, and secondly how are we to prevent this transmission.

In the primary stage the disease is transmitted only by direct contact with secretion of the primary sore, while in the active secondary stage the blood or any of the secretions from the eruptions on the skin, from the genital tract, and from the nose and mouth may convey the infecting organisms.

It is from the cases with secondaries that we get most of the infections through illicit intercourse, by kissing, the use of public drinking vessels, eating utensils, bed linen, towels, dentists' and physicians' instruments, musical instruments, pipes, cigars, cigarettes,

etc., and most probably through the bites of such insects as mosquitos and fleas.

Kissing is one of the commonest ways in which non-venereal syphilis is transmitted, since the mouth is, in the secondary stage, usually fairly alive with the organisms. The kissing of children by people outside the immediate family and especially by the negro nurses, who belong to a race which in this section of the country are very commonly syphilitic, is, as you can see, a practice not without risk.⁵

Cups, glasses, knives, spoons, forks, etc., have been known many times to have conveyed the disease, as have pipes, towels, handkerchiefs, etc.

Cases of infection from dental instruments have been reported, though with the recent advances in aseptic dentistry this is now very rare. Infections have been reported even through the use of a stick of silver nitrate previously employed in touching a syphilitic lesion. The physicians, wet nurses and midwives handling syphilitic patients without proper precautions have been frequently infected. Barbers, too, have not been without their share of the blame for the transmission of the disease.

Hanot relates a curious case (Fournier) in which a trumpet was given to a young child who was instructed in its operation by his mother and a young uncle. The uncle was suffering from syphilitic mucous patches of the throat. Later the child died of general syphilitic paralysis and the mother died of syphilis of the liver.

Another exceptional case has been reported of a man who, standing on the street, was accidentally struck on the face by a whip lash. A syphilitic sore developed and it turned out on investigation that the owner of the whip had a syphilitic throat and was in the habit of chewing the lash.

The method of transmission of more social interest is the hereditary transmission of syphilis. In this connection there are one or two very unusual facts worthy of your attention. The child may receive the infection from either the father or the mother, the other being healthy, or from both. The mother may acquire syphilis after conception and convey it to the child in the womb. A curious law first described by Cole in 1837, to which there seemed to be no exception, is that a child inheriting syphilis from the father, the mother being originally healthy, may infect a wet nurse but not the mother

who seems in some way protected, though she has never shown any evidence of the disease. Since the introduction of the Wassermann test it has been shown, however, that a certain number of these mothers have acquired a mild form of syphilis, but the rule still holds good with a certain number, and this peculiar immunity of the mother is as yet unexplained.

I wish to call your attention here to the fact that a certain number of women are infected by their husbands. Fournier has shown that in France the percentage of these cases is quite high—in 100 cases of syphilis in women twenty-four were infected by their husbands and were innocent acquirers of the disease. These figures are too high for this country, I feel sure, though there are not enough statistics conclusively to prove my belief.

Fournier has further reported the result of 1,500 cases of pregnancy occurring in families in which either one or both parents were syphilitic with an infant mortality of 68 per cent. This, very unfortunately, has been shown by other observers to be true.

Syphilis is one of the commonest causes of abortion or premature labor, and it should be expected in all cases where a perfectly satisfactory explanation for this accident cannot be adduced.

In premature births due to syphilis the child is usually dead when it comes into the world; less frequently it is born alive with definite manifestations of the disease; again, in a still smaller number of cases, it is born without signs of the disease which, however, make their appearance later, while occasionally, particularly when the paternal or maternal infection has occurred some years previously, the child may never manifest any signs of the disease.⁶

Many syphilitic children born alive are cured after thorough treatment, but many of these who do not eventually die go through life as weaklings, some feeble minded or idiotic, and show traces in the shape of their noses, teeth, limbs or head of the disease which they have inherited.

Turning now to a discussion of the ways of limiting the transmission of the disease from one individual to another, we find that it depends not only upon the education of the public in the dangers of transmission by the implements of common use, and social customs such as kissing, but upon the eradication or regulation of the so-called social evil.

for it is through this channel that the majority of infections are received.

The eradication of the social evil seems to be, in the light of our knowledge of humanity and of history, almost impossible. Constantine, Justinian, Louis IX of France, and Philip IV of Spain¹ all made attempts to do this, but even with all the force of arms, and the powers of church and state they were unable to accomplish their aim. I do not wish to have you believe that it is a hopeless task, for it may be possible at some future time, but it is not the most direct method and could only be carried out after many years of effort.

Medical inspection of houses of prostitution is even now being done in some of the European and Asiatic countries with reported success. There is some doubt about the advisability of such a procedure, however, even if it is successful, for we would thus recognize and countenance the existence of such places.

The most direct method towards the solution of the problem is by education of the public in all these matters—by throwing aside all our false modesty about such things and talking so plainly that no one will fail to understand and once having understood, will surely, though perhaps slowly, come to heed what we will have taught. The education of children in sexual matters is sadly neglected, which goes to prove that the parents themselves are lacking in the proper knowledge about such subjects, and our teaching should begin with them.

The position, then, of the physician and public in relation to the diagnosis, treatment and handling of cases of syphilis is as follows: Since we are able to definitely diagnose the great majority of primary syphilitic lesions by the demonstration of the presence of the organism, it is the duty of the public to have all unusual sores inspected, and the duty of the physician to let no suspected sore, be it genital or extragenital, go unexamined for the *trepennoma pallida*. There are two important reasons for this, namely, the possibility that some one else will become contaminated, and the increased difficulty with which most cases are cured once the disease has extended to the secondary stage.

In cases with lesions resembling secondary syphilis the Wassermann test should be tried wherever there is the least doubt as to the diagnosis. This holds good for the tertiary

lesions as well, of course, and wherever there is a nervous lesion of doubtful origin, in which there is history of a possible previous syphilitic infection this test should never be neglected. In cases with a negative Wassermann reaction it may be often advisable to administer a dose of salvarsan or neosalvarsan and then obtain a specimen of blood or cerebro-spinal fluid for a test, for it has been found that the Wassermann reaction is then positive when it was negative before.

The physician and patient should both keep in mind the danger of recurrence of the disease after an apparent cure, with the development of hopeless nervous lesions, or the heredity or conjugal transmission.

As to just how long the disease should be treated before marriage is allowed is a subject worthy of deep consideration in each case, for no rule holds good for all cases. The desirability for secrecy in such instances should not influence us to advise what our better judgment forbids.

All false modesty concerning the discussion of such subjects should be laid aside, and the methods to be undertaken to prevent the further spread of the disease become matter of public interest and common discourse. General education of the entire public should be undertaken, and the education of our children on sexual matters be much more thoroughly carried out, showing the value of sexual abstinence, or continence, and the dangers of syphilitic, as well as other venereal infection, from illicit intercourse.

In closing let me add that syphilis is in the majority of cases a curable disease, and emphasize once more the fact that the sooner treatment is begun the surer will be the cure. This holds good in the case of hereditary syphilis and should stimulate us in cases of child birth, where there can be a possibility of the disease, to search for its symptoms. A routine examination of all placentas should be made, since it has been shown, as you may know, that syphilis causes a very characteristic change in the chorionic villi.

The danger one encounters in the delivery of a paper of this kind is that of becoming an alarmist. However, too conservative a paper would not have the desirable result of stirring up general feeling and action. That you may clearly judge for yourself concerning the prevalence of this serious menace to our public health, I would like you to observe that the mortality statistics published by the Bureau of Census for the

United States show for 1900, 1,029 deaths in each 100,000 inhabitants due to syphilis, and in 1909 this has increased to 2,858 for each 100,000 inhabitants, which is, undoubtedly, a conservative estimate.

References.

¹Amer. Med. for Jan., 1909, Vol. XV, p. 35. Quoted by Henry Morris, London Lancet, Aug. 24, 1912.

²A System of G. U. Dis. and Syphilology and Dermatology, by Prince A. Morrow. Vol. II. 1894.

³Fournier.

⁴Noguchi. Serum Diagnosis of Syphilis. Third Edition.

⁵As an illustration of the possibility of infection by kissing, I wish to refer you to a recent report in the Journal of the American Medical Association for September 2, 1911. Eight persons were reported to have been infected by one young man who had a chancre on his lip.

⁶J. Whitridge Williams. Textbook of Obstetrics.

⁷Morrow. A Syst. of G. U. Dis. and Syphilology and Dermatology. Vol. II, p. 712.

CHOLERA INFANTUM.*

S. A. V. Christophine, Attapulugus, Ga.

A rather grave form of infantile diarrhoea with symptoms closely resembling those of true cholera; frequent persistent vomiting, copious serous dejections, high fever, and a rapidly developing condition of profound collapse. Holt & Crandall say that it is a comparative rare disorder, forming not more than from a half to two per cent of all diarrhoeal cases met with during the summer months. Unfortunately for the accuracy of our statistics the term has been applied indiscriminately to all cases of severe infantile diarrhoea. In the opinion of the best writers the name should be limited to such cases as are characterized by intense choleric form symptoms. Symptoms after a variable, but generally brief period characterized by restlessness, abdominal discomfort and a rising temperature, the infant begins to vomit and simultaneously or shortly afterwards purging commences, the vomiting recurs frequently. At first, the contents of the stomach are ejected; then a bile stained mucous, and lastly nothing but a serous fluid. The evacuations from the bowels soon assume the same serious character. They lose their fecal appearance and acid reaction, and consist almost entirely of a colorless fluid, copious in amount, alkaline in reaction and generally a peculiar musty odor. Temperature per rectum is always elevated, generally between

103 degrees F. and 105 degrees F. Nevertheless the body feels cool to the hand. There is extreme thirst, but liquid and foods of all kinds are rejected by the stomach shortly or immediately after they are taken. With such a drain upon the fluids of the body, the infant rapidly loses weight and strength, and in a few hours its appearance is greatly altered. The face is of an ashy palor, the eyes sunken, the features pinched and the expression anxious. The open fontanelle is much depressed, the pulse is quick and weak and may be intermittent, the urine is scanty and in severe cases appears to be altogether suppressed. During the earlier hours of the disease, restlessness is a marked symptom, but as the strength fails, this is gradually replaced by a condition of apathy, which later on may develop into the hydrecephaloid state, the spurious hydrecephalus of older writers. Should a disease take this course the infant will be found lying in a semi-comatose condition with head drawn backward, pupils sluggish and sometimes unequal, abdomen retracted and respiration possibly irregular and of the Cheyne-Stokes type. There may also be twitching of the arms and legs. Toward the end the infant becomes more comatose or an attack of convulsions may supervene and usher in the end. In some cases the condition of hyperpyrexia may precede the fatal termination. In others the high temperature of the earlier hours may pass away and a more moderate pyrexia, or even, according to some writers, a normal or subnormal temperature takes its place. Nevertheless if the graver symptoms of collapse persist, this fall must be as an unfavorable omen. In such cases we sometimes find that both vomiting and purging cease a few hours before the end. The course of this disease is very rapid, terminating in many cases of collapse and death in from twenty-four to forty-eight hours after its commencement. Should hydrecephaloid symptoms set in the end may be delayed for a day or two longer. In a few cases which go on to recovery, cessation of vomiting appears to be one of the earliest symptoms of improvement. Gradually the character of the stools alters and they become more fecal. The restlessness abates and improvement may be noted in the pulse and general appearance of the infant. Convalescence, however, is always tardy, and relapses are not uncommon.

Diagnosis.—The character of the onset, the

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persistent vomiting, the profuse serous dejections, high temperature, and the symptoms of profound collapse rapidly developing within a few hours form a picture unlikely to be mistaken for any other condition. Fitch says the odor of the stools makes it possible to determine two general classes of fermentation. The fermentation of the carbohydrate foods leads to the development of acids and gases, but under no circumstances to products with a putrid odor. Proteids yield either odorless or putrid products.

Etiology.—The exact nature of cholera infantum has not yet been proved, but analogy points strongly to its being a toxic condition produced by the absorption from the intestinal tract of some special toxine originating in fermenting or decomposing food. The prolonged heat of July and August appears to be a distinctly predisposing factor. Infants living under faulty hygienic conditions and supplied with an unjudicious dietary or with milk food in the preparation of which due care has not been taken, appear to be among those most prone to attacks, although the disease may develop suddenly in the comparatively healthy, yet we find that in the majority of the cases there has been a more or less severe antecedent disorder of the gastro-intestinal tract.

Pathology.—There are very few changes found after death either in intestinal canal or in any of the other organs. The only lesion present may be a desquamative catarrh of the gastro intestinal tract. In those cases which develop hydronephalic symptoms, the appearance found after death bears no proper relation to the gravity of the symptoms. The kidneys are generally found paler than usual with a moderate cloudy swelling of the cortex, but not to a greater extent than may be present in other febrile disorders of infancy. (Holt.) The earlier symptoms may, therefore, reasonably be ascribed to the influence of some toxine upon the heart or nerve centers and vassomotor nerves of the intestine, while many of the later symptoms must be referred to the great abstraction of serous fluid from the body.

Prognosis.—Few diseases have a worse prognosis. The higher the rectal temperature, the younger the infant, the hotter the weather and the more unhygienic the surroundings, the more hopeless is the case. Rotch considers the disease to be, to some extent, self limited, and thinks if the infant survives the first three days a crisis comes

and the prognosis improves, but this has not been my experience.

Treatment.—Regarding the disorder as a toxic condition due to the absorption of a poison from the alimentary canal, our first efforts should be directed to clear out this tract as promptly as possible. A few grains of calomel should be given in divided doses. As soon as possible the stomach should be thoroughly washed out with a tepid weak solution of sodium bicarbonate (half dram to the pint.) Following this the whole tract of the colon should be irrigated with a saline solution (one dram of sodium chloride to the pint.) To insure passage of the solution into the higher portions of the colon, the hips of the infant must be well elevated and tube passed well up into bowels, due attention being paid to its curve. The solution should be allowed to run into the gut in a gentle, steady stream. No nourishment should be permitted during the first twenty-four hours. To counteract the depressing action of the poison and to prevent the parietic condition of the intestinal vassomotor system, a hypodermic injection of morphine and atropine. Holt recommends for an infant one year old an initial dose of not more than one one-hundredth grain of morphine and one-eighth one-hundredth grain of atropine—repeat two to four times in twenty-four hours. Cecil says no drugs are comparable to small doses of atropine for controlling the depression and purging of cholera infantum. Cold bath if temperature is to or above 103 degrees F. To counteract the effects of the drain of fluid from tissue, no method can compare with the injection into the cellular tissue of a sterilized saline solution, forty-five grains of sodium chloride to the pint; about a half pint of this solution may be injected at once into the subcutaneous tissues of the thigh, abdomen or buttock, and may be repeated twice a day. Hydronephaloid symptoms call for a free use of stimulants, but opium in this condition is better avoided. During the course of the disease care must be given to insure all possible warmth for the extremities. Sinapism over the stomach may be of an occasional benefit. A mustard bath is a sovereign means of stimulating the vassomotor and heart from the periphery. I have had no experience with the injection of artificial serum and cannot say as to what benefit might be derived from them.

THE PROS AND CONS OF DUODENAL ALIMENTATION.*

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The method of introducing nourishment directly into the duodenum without a sojourn in the stomach was devised by Dr. Max Einhorn and first described by him in 1910. This at once opened up new and promising possibilities and was eagerly hailed by many who had been struggling with the problem of bodily upkeep in patients with gastric or duodenal ulcers. It seemed to clearly point out a way to those who had been painfully steering between the Scylla of inefficient rectal alimentation and the Charybdis of eroded and intolerant stomachs, that would not "stand for" proper nourishment; in other words we might have said in the language of that familiar old hymn,

"This is the way I long have sought,
And mourned because I found it not."

This method has now been tried out for about three years, and while it has not found favor with some competent and conscientious gastroenterologists, I feel that I can truthfully assert that duodenal alimentation is a distinct mark of progress in the treatment of those conditions where rest for the stomach is indicated. The principal field for its usefulness lies, of course, in the management of certain gastric and duodenal ulcers, but its legitimate scope has been considerably enlarged by other investigators, who have carefully and thoughtfully worked along this line.

Briefly, the method consists in introducing the duodenal pump into the digestive tract, and feeding is begun as soon as its end is well within the duodenum. The apparatus is left in the duodenum from ten to fifteen days, and generally the thin rubber tubing does not inconvenience the patient, though there are decided exceptions, as will be mentioned later.

There are two forms of apparatus employed: One the regular outfit devised by Einhorn, consisting of a duodenal tube with a perforated olive at its distal end. The upper end is fitted with a pet cock, and the

fluid aliment is gently forced in with a glass syringe. The other apparatus can be fitted up by the physician and consists of a specially-made thin rubber tube about thirty inches long and one-sixteenth of an inch in diameter. Into the distal end are forced about three BB shot, or small steel balls, such as are used for bearings in bicycle wheels. This affords the requisite weight to propel the end of the tube into the duodenum. About half a dozen or more small holes are burned through the lower two inches of the tube with a large hot needle, allowing egress for the nourishment. The upper end of this tube is attached to a Murphey apparatus, so the food can be administered by the "drop method," and can be gradually and slowly given. Either of these methods can be successfully employed, if the proper precautions are taken.

Seldom it is that duodenal feeding can be satisfactorily carried on at the patient's home. While not difficult, there are a number of little details small in themselves, but the neglect of which will cause annoyance or failure. For instance, the fluid must always be strained, so as to eliminate any coarse particles which might block up the tube. Following the feeding a certain amount of water should be introduced, and finally some air should be forced through the tube, and the stop cock closed. Often, too, the attendant will unconsciously hurry the feeding, thereby crowding the duodenum and giving the patient quite a train of uncomfortable sensations. Occasionally the tube gets obstructed or kinked in spite of all precautions, and has to be temporarily removed. Should this occur too often, the patient is liable to become discouraged or dissatisfied, and for this reason every care should be taken that the tube is thoroughly washed with water and distended with air at the close of each feeding.

The following is a general scheme of feeding as employed by Dr. Einhorn, and which I have also practiced in a number of cases. Usually the following nutritive material is used every two hours from 7 in the morning until 9 in the evening: Milk, 240 c.c.; one raw egg; sugar of milk, fifteen to thirty grams. The mixture is well beaten up, carefully strained, and injected at body temperature. Occasionally cream may be added when the patient is poorly nourished, or one ounce of butter may be melted into the milk. Where there is a tendency to loose bowels,

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the sugar of milk may be omitted. If the milk seems to disagree, it may be peptonized, or, this failing to be comfortable, may be left off altogether. Often it is wise to begin simply with the egg albumens, working up to the whole egg later on. Should milk be inadmissible, there may be employed as a liquid oatmeal, gruel, pea soup or bouillon. The pea soup may be made from Knorr's pea flour, one tablespoonful to 250 c.c. of water, which may be boiled down for from one and a half to two hours to 180 c.c. In one instance I used a rather thick barley water made from Robinson's patent barley flour with good results.

There are other substances suitable for duodenal alimentation, provided they can be thoroughly emulsified and strained, and are not irritating to the sensitive duodenal walls.

Besides the alimentation, the patients may be given a quart of physiological salt solution by the rectum, according to the Murphy drop method, or the water may be allowed to go through the duodenal tube directly into the intestine, but it should go very slowly, drop by drop. There should be never less than twenty minutes consumed in giving a duodenal meal, and thirty-five to forty-five minutes would be better.

In discussing the pros and cons of this method of feeding, let me first mention some of the difficulties and disadvantages.

Some patients have such irritable fauces that the presence of any foreign body in the mouth or throat keeps them constantly upset. I have seen more than one patient who claimed to have been unable to sleep or enjoy a moment's comfort while the tube was in the esophagus and mouth. As mental and temperamental quiet is an important factor in the successful treatment of gastric and duodenal ulcers, it can be readily seen that the presence of any constant cause of extreme annoyance is a great handicap.

There are other patients who suffer both pain and nausea from the duodenal tube. This is due either to a hyperesthetic condition of the gastric mucosa and the pylorus, setting up increased motility of the stomach and spasm of the pylorus; or perhaps the ulcer may be located so that the tube impinges directly on the eroded and sensitive ulcer surface, so that there is no rest for the suffering patient until it is removed. I have had several patients who were really anxious to fully "try out" duodenal alimentation, and who honestly endeavored to retain the

tube, but who simply retched and vomited almost constantly until the tube was removed.

I had one patient (a neurotic Jewess) who would remove the tube every night in her sleep, claiming that she did this unconsciously, or perhaps subconsciously. While I did not contradict her statement, her explanation was taken "*cum grano salis*."

Both Drs. Kemp and Bassler, of New York, condemn this method in unqualified terms, claiming that the tube, as a foreign body, will not only irritate, but will promote a greatly augmented flow of hydrochloric acid, which increased acidity will defeat the main object in view—the healing of the ulcer.

As it has been proved time and again that even a nutrient enema will in some instances increase the gastric secretions, it is easy to conceive that the constant presence of a tube may increase the gastric juices, as a cinder in the eye would increase the lacrimal secretion.

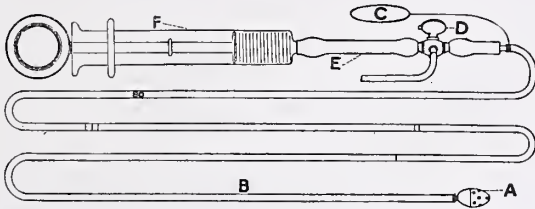
On the other hand duodenal feeding has many favorable and positive results to its credit. With well-selected cases, with careful technic, with due attention to the dietetic "shades" required, with thoughtful adaptation of quantity and strength of feeding, as well as time intervals, to each individual case, good effects will be attained that can be accomplished in no other way.

Occasionally an "ulcer patient" who has been periodically vomiting every time any nourishment was taken, will in a few days after the tube is introduced, and the body is nourished without the assistance of the stomach, become both quiet and comfortable.

Dr. Wm. Gerry Morgan, of Washington, Drs. E. L. Kellogg and Wm. Van V. Hayes, of New York, and several others of high repute, are accomplishing satisfactory results with duodenal alimentation in many cases that have responded but poorly to other methods. I might say, also, that in my own experience I have in a number of instances apparently cured some gastric ulcers of long standing, though sufficient time has not elapsed in some to be too positive in my claims. I may say, however, that the patients lost but little weight (most of this being due to diminution of body fluids), and that the period of treatment was much more comfortable than when either rectal alimentation was employed, or the Lenhardt or some of its modifications.

Not even its strongest advocates will claim

that every patient can be benefited, or even endure this form of feeding, but from a rather full experience I can commend it as worthy of a trial in many of the forms of gastric irritation. It is specially applicable in under-nourished individuals, and in others whose stomachs proper simply need a rest, it will afford a feeling of digestive well-being most gratifying to both patient and physician.



Einhorn duodenal pump: A, metal capsule, the lower half provided with numerous holes, the upper half communicating with tube B; I, II, III, marks of 40, 50, and 70 centimeters from capsule; C, rubber hand with silk thread attached to end of tubing, which can be placed over the ear of the patient; F, feeding syringe; E, collapsible connecting tube; D, three-way stopcock.

Fig. 1.

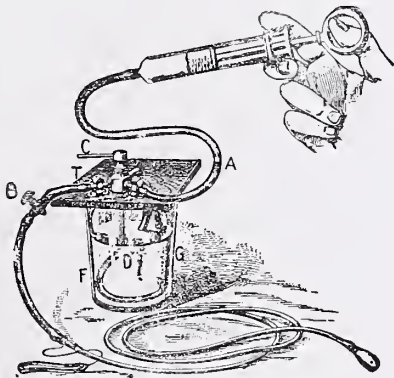


FIG. 2.—The Duodenal Feeding Apparatus, with Table Support. A, Tube leading to syringe; B, tube leading to duodenal pump; C, crank; D, tube leading to fluid; F, fluid; G, glass; T, table support or shorter support. When crank C is turned parallel to A, fluid can be aspirated from the glass into the syringe. When C is moved parallel to B, the fluid from the syringe can be emptied into the duodenum.

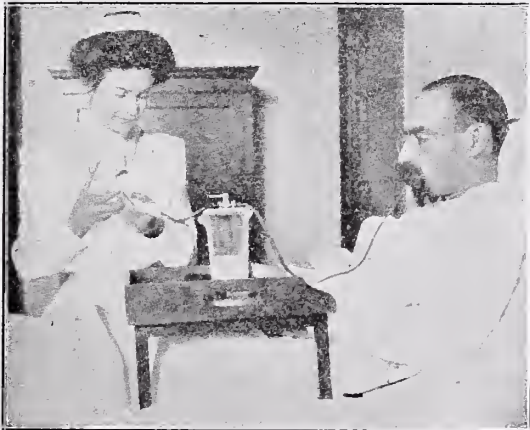


Fig 3.—Patient being fed through the Duodenum

As stated in the beginning of this brief article, I consider duodenal alimentation a distinct forward step, and as such I commend it to the thoughtful consideration of my readers.

A CASE OF LARGE INGUINAL ANEURISM CURED BY TRANSPERITONEAL LIGATION OF THE EXTERNAL ILIAC, WITH AN OBSERVATION ON NATURE'S EARLY PREPARATION FOR A COLLATERAL CIRCULATION.

By Eugene R. Corson, M.D., Savannah, Ga.

The following case offers certain clinical features of interest. W. E. D., a negro, 53 years old, noticed eight years ago a small swelling in the right groin, the size of a hazel nut. There was no throbbing, and only an occasional pain after long walking. It began to grow larger very gradually and he got some relief from rubbing it. The pain did not increase with the growth, nor did it interfere with his walking.

On September 1, 1912, when getting off a car, he had a sudden darting pain in the tumor which became very severe and constant, so that he had to take to his bed, and he then noticed that the tumor began to grow very rapidly. He remained constantly in bed and took opiates. By October 9th, when I saw him for the first time, the tumor had grown to a large size, some idea of which may be obtained from a rough sketch made by me just before operation. The tumor was tense and pulsating to the eyes and to the touch.

I operated October 11th by a median incision and tied the external iliac with heavy silk midway between the internal iliae and the aneurism itself. The operation was very easy. Two points were especially noted at the time. One, that the aneurism, which, from the involvement of the abdominal wall in the swelling, gave impression that the external iliae itself was involved in the aneurism, and second, that the internal iliae had grown to the size of the external iliae, the direct continuation of the common iliae, showing that nature had already provided for the collateral circulation for the limb from obstruction to the blood flow through the aneurism itself.

This apparent involvement of the external

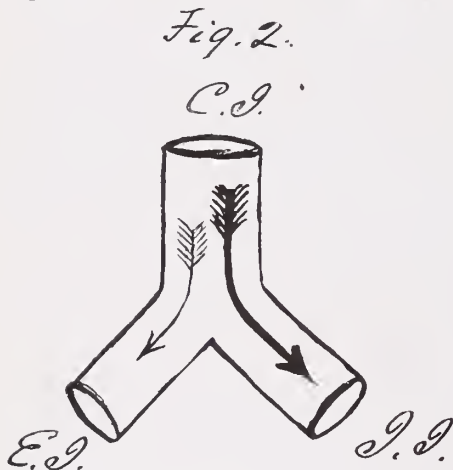
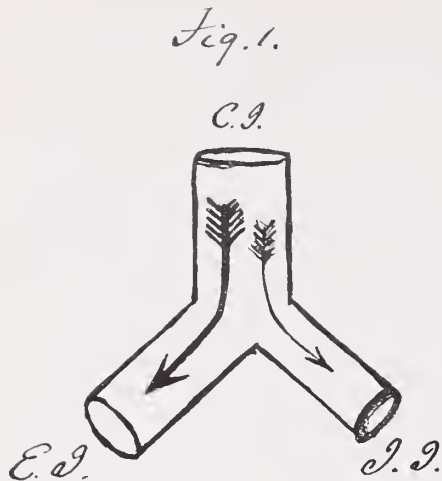


Fig 1 —The normal vessels. Fig 2 —The condition found at operation, with the internal iliac the size of the external iliac.

C. I. Common iliac.

E. I. External iliac.

I. I. Internal iliac.

The lighter arrow shows the lighter flow.

iliac is caused. I think, by the aneurismal sac, as it grows, curling up towards the line of least resistance, namely, the abdominal cavity, and avoiding the tense and resisting fascia lata of the thigh. The literature shows that operators have frequently been deceived by this, imagining that they would have to tie the common iliac, but finding on operation the state of affairs which I found. The establishment of a collateral circulation in the early stages of an aneurism, I believe, must be the rule rather than the exception, for the literature is full of desperate cases of hemorrhage from this very collateral circulation when the position of the aneurism forbids a complete control of the circulation, and the effort is made to do the radical operation of Matas.

On this account I made no effort to deal with the sac, as well as the fact that my patient was a negro and prematurely old, as so many of his race are. His pulse was poor before operation and remained poor while in the hospital. There was no temperature. The pain disappeared at once. The aneurismal swelling rapidly went down, and by the end of the second month was reduced to a negligible induration in the groin, without pain or interference with locomotion.

I have drawn two figures showing the normal and relative sizes of the injected vessels concerned, taking my measurements from the old but admirable work of Nathan R. Smith. They are undoubtedly, as admitted by the author, somewhat in excess of the vessels *intra vitam*.

In no other position are we able to see so easily the enlargement of the first collateral branch which is to provide the collateral flow for the limb. I believe that in the majority of the cases there is early set up in the growing aneurism sufficient resistance to the circulation to start an early enlargement of the collateral vessels, and that nature is soon ready for the obliteration of the aneurism's afferent vessel. The generally good results following operation show this, and they are in striking contrast to those conditions where the circulation of the limb is suddenly cut off, and nature, taken unaware, cannot soon enough establish this collateral flow.

In this case there were no symptoms of obstructed circulation in the limb following the operation. Since the man has been up and walking about there has been some swelling of the limb, but without pain, and a small ulcer, the size of a dime, has appeared over the *tendo Achillis*. This is slowly healing.

In the majority of cases, aneurisms so situated that the circulation is not under complete control, are best treated by the simple ligation of the vessel. Where, however, we have complete control of the blood flow, the elimination of the sac at the time of ligation of the vessel is, of course, the proper surgical procedure. The constant tendency in surgical work is towards more complete operations, and the brilliant work of Matas and Halsted is directly in line with this great progress in modern surgery. But we must constantly have cases where wisdom prompts more conservative work, and

we stop at the danger line, or consider the two-stage operation.

Certainly in my own case the rapid disappearance of the tumor shows what nature herself can do, and under conditions which seem very unfavorable.

Aneurism is comparatively common in the negro from early arteriosclerosis, syphilis, and heavy laboring work. I have not any definite figures to show this, and can only judge from my own experience.

The rough sketch I have made will show at least the great size of the tumor and how easy and rapid the cure must have been to show no swelling in the groin at the end of three months.

One more point of interest is the long quiescent beginning aneurism, of small size, which suddenly after a misstep or strain began to grow very rapidly with great pain. My explanation of this is that the aneurism started originally directly in the bend of the groin, but controlled by Poupart's ligament and the dense and tense fascia lata of the thigh. That when the patient made this misstep, the small sac slipped from under the firm support of these tissues, and came under the control only of the pelvic fascia where it had practically a free and open field of growth, a growth which was phenomenal for its rapidity and viciousness, as rapid, for example, as an ovarian cyst.



THE JOURNAL

OF THE

Medical Association of Georgia

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CONTRIBUTIONS

EXCLUSIVE PUBLICATION: Articles are accepted for publication on condition that they are contributed solely to this journal.

CONTRIBUTIONS TYPEWRITTEN: Authors should have their contributions typewritten—double space and with ample margin—before submitting them. The expense is small to the author—the satisfaction is great to the editor and printer. We cannot promise to return unused manuscript, but try to do so in every instance. Manuscript should not be rolled or folded.

ANONYMOUS CONTRIBUTIONS, whether for publication, for information, or in the way of criticism, are consigned to the wastebasket unread.

NEWS: Our readers are requested to send us items of news of a medical nature, also marked copies of local newspapers containing matters of interest to physicians. We shall be glad to know the name of the sender in every instance.

A REMINDER.

This issue of the Journal was mailed so as to reach you just before the time you should be leaving for the annual meeting. It was hoped that it would be a reminder and perhaps you would go and help make this the greatest meeting in the history of the Association. The prospects are good and it is your duty to be on hand.

A REQUEST.

This issue of the Journal completes Volume IV. The first issue appeared August, 1911, and it was a new venture for the Association. Few members have any idea of the expense and work attached to a proposition of this kind. We feel a certain amount of pride in the fact that we have been able to establish a Journal on the lines of this and accepting no undesirable advertisements, have been able to make it an asset to the Association within three years.

We feel that some apology may be due our members for the limited amount of so-called personal news, and County Society reports, but would call attention to the fact that we have no way of obtaining such information, other than through our members, and with but few exceptions no reports have been made. Please bear in mind that this is your Journal and you can make it what you want it to be.

We are now in a position to furnish you a better and larger Journal, if you will furnish the news.

If you do not receive the Journal after this issue, it will be due to the fact that you are in arrears. Pay your dues to your County Secretary, or if you have no County Society, remit direct to the State Secretary.

HOTEL DEMPSY
Headquarters



TO INTEREST PHYSICIANS AND NURSES IN TUBERCULOSIS.

National Effort to Improve Teaching on Consumption and Help Family Doctors.

For the purpose of securing more co-operation from physicians and nurses in the anti-tuberculosis campaign, The National Association for the Study and Prevention of Tuberculosis has inaugurated a movement to bring the importance of this subject to the attention of these two groups, according to an announcement made from headquarters today.

Among the first things which the Association is trying to do is to induce the medical colleges and schools of nursing to give more instruction, particularly of a clinical nature, on tuberculosis. An effort will be made also to reach the individual practitioners and nurses by special booklets prepared for this purpose. The clinical and other facilities of the various organizations affiliated with the National Association will so far as possible be made available for the widest possible use in training doctors and nurses in tuberculosis work.

"The object of this campaign," says Dr. Charles J. Hatfield, Executive Secretary of the National Association, in making the announcement, "is primarily to secure more accurate and earlier diagnosis of tuberculosis on the part of physicians and to show nurses the great opportunities of service in the home care of consumptives. We shall also be able to put the average family physician in touch with the best methods of treating tuberculosis and with the most recent literature on that subject, thereby affording to the general public increased protection from this disease. Practically all of the medical colleges and schools of nursing of the country have expressed their approval of our plan and have offered to co-operate with us. While the medical profession generally has unselfishly assisted the nation-wide campaign against this disease, we feel because of its prevalence, tuberculosis should be given special attention by medical students and practicing physicians everywhere. No other single disease demands so much time and attention from the general practitioner in medicine. We shall try to make it easy for any doctor or nurse to acquire a specialized knowledge of tuberculosis."

THE PRIZE COMPETITION.

In offering a prize of \$1,000 for a social hygiene pamphlet for adolescents, suggested and generously provided by the Metropolitan Life Insurance Company, The American Social Hygiene Association is presenting a problem for solution by writers in the social hygiene field. The conditions under which this offer is made are printed elsewhere in this number of the Bulletin. No suggestions or restrictions as to methods of presentation or treatment of the subject-matter are made. It is, perhaps, unnecessary to say that accuracy of statement, such use of statistics and quotations as is warranted by the context from which they are taken, broad and practical grasp of the subject as presented, soundness of pedagogical method, and attractive and convincing form, are among the important points to be considered in judging the merits of manuscripts submitted.

The questions most frequently asked by those interested in the competition are: "What kind of pamphlet is wanted? Is it to be written for boys, or for girls, or for both—or for parents? Must it cover the entire period of the four years specified? Must it take up the physiological changes of adolescence? What sort of instruction may the author assume that the child has had before reading the pamphlet?" To such inquiries the reply is that the prize has been offered for the best solution of the problem of approaching through the printed word the youth of America from twelve to sixteen years of age. If the author is convinced that the indirect approach through the parent is the proper method, he may prepare his manuscript for use by the parent. If he thinks that the most pressing need is for a pamphlet to be placed in the hands of boys, he may prepare his manuscript for that purpose. Similarly, he may prepare it for the use of girls, or, if he thinks it more desirable, he may combine his information into a single pamphlet for the use of both boys and girls. If he believes that adolescents from twelve to sixteen years of age do not form a practical group, he may direct his effort toward any portion of this age group (for example, those from twelve to fourteen years, or those from fourteen to sixteen years), and may so indicate. He may submit his manuscript as one of a series designed for special groups, but he should present also the other numbers of the series to show its character as a whole.

Notes explaining the points of view from which it has been prepared may be submitted with the manuscript, bearing the same identifying mark or pen name, but not the name of the author.

It is generally recognized that the early adolescent period in the life of both boys and girls presents one of the most difficult problems in educational work. In the special fields of instruction or education with which the social hygiene movement deals, this period is probably the most difficult. There is substantial agreement as to what information ought to be given the young child and as to the desirability of thorough, scientific instruction touching on the problems of sex and reproduction for persons of mature years. But the problem of the early adolescent period still awaits a satisfactory solution.—The American Social Hygiene Bulletin, March, 1915.

THE AMERICAN SOCIAL HYGIENE ASSOCIATION

Has been offered a prize of \$1,000 by the Metropolitan Life Insurance Company, to be awarded to the author of the best original pamphlet on social hygiene for adolescents between the ages of twelve and sixteen years, approved by a committee of judges to be selected by the Association.

Competition for this prize is open to all.

The Metropolitan Life Insurance Company desires to use the winning pamphlet among its industrial policy holders.

The Committee of Judges will conduct the competition in accordance with the following conditions:

Contest closes July 31, 1915, at midnight; any manuscript received later will not be considered.

Manuscripts should not exceed 3,500 words and must be in English, and must not have been previously published.

Manuscripts must be typewritten on one side only of plain white paper 8x10½ inches.

Manuscripts must be paragraphed and punctuated for submission as "copy" to printer.

Each manuscript must bear some identifying mark or pen name, but not the name of the author.

The author's name and address, and the identifying mark or pen name should be in a sealed envelope, accompanying the manu-

script; the face of the envelope should bear the mark or pen name only.

More than one manuscript may be submitted by the same author.

The winning manuscript, in consideration of the award of \$1,000, becomes the property of the donor of the prize, all rights therein being surrendered by the author.

The right to purchase any manuscript submitted, at the rate of 5 cents a word, is reserved by the Metropolitan Life Insurance Company and by the American Social Hygiene Association.

Any manuscript not winning the prize or purchased will be returned to the author if return postage is provided.

Address manuscripts and requests for further information to

The American Social Hygiene Association,
105 West 40th Street, New York City.

THE DOCTOR AND THE MEDICAL SOCIETY.

At his inauguration as President of the Fulton County Medical Society, Atlanta, Georgia, Dr. Stewart R. Roberts read an address with the above title (Journal of the Georgia State Medical Association, February, 1915, Vol. IV, No. 10, page 285) that contains much of interest pertaining to the history of medical organization as well as many important facts regarding the advantages of medical societies to those who have the wisdom and good fortune to be members.

He goes a long way back for a starting point, even back to the occasion when Jupiter, suffering with the cephalagia resulting from a megaloecephalus that Apollo himself, though god of medicine, could not cure, orders his lusty "son, Vulcan, to split open his head with an axe." When this, "earth's first operation," was performed, out leaped Minerva, goddess of wisdom, full grown and panoplied in bright armor.

The doctor draws the deduction that "The failure of medicine was the beginning of wisdom," but fails to notice that an equally fair inference would be that this interesting affair might account for the lack of wisdom so often displayed by the sons of men. The hand of Vulcan spilled it.

From this ancient base, the doctor leads through the medical centers of Cos and Athens, with their Hippocrates, Aristotle and Vesalius, to the days of Harvey and Sydenham, to the organization of the first known

English-speaking medical society, "The Medical Society of London," in 1773, 118 years after the death of Harvey. A few years later, namely, in 1788, in Litchfield County, Connecticut, the physicians organized a a medical society. The American Medical Association was not organized until 1847, while at Atlanta "what is now known the Fulton County Medical Society was not organized until April 10, 1884."

Thus late was the seed planted, after thousands of years of waiting, that has reached the present magnificent proportions in every civilized country.

Dr. Roberts proceeds to consider the relations of the doctor to the medical society and to his environment from every possible point of view. He shows how the informal conferences over cases of interest rouse the activity of members and lead them to improve their ability. How friendships are formed, misunderstandings corrected, unity of effort is secured and the influence of each member is increased. He calls attention to the growing usefulness of members, so that the older are the most valuable. He speaks of their retrospect of years, the vastness of their experience.

Most of us take it for granted that medical societies are of value to progressive physicians, but one cannot read Dr. Roberts' address without feeling grateful for living at a period when medical organizations are doing so much for the science and practice of medicine and surgery. This brings up the thought that in the South most of the State Medical Associations meet in April and May. Every physician owes it to himself, and to organized medicine that has accomplished so much for elevating the standard of the medical profession, to make an annual pilgrimage to mingle with his professional brethren on the occasion of the meeting of his State Medical Association.—Southern Medical Journal.

NEW MEMBERS FOR APRIL.

B. A. Deal.....	Statesboro, Bulloch
W. E. Benson.....	Marietta, Cobb
J. A. Crowther.....	Savannah, Chatham
M. X. Corbin.....	Savannah, Chatham
J. N. Carter.....	Savannah, Chatham
W. R. Dancy.....	Savannah, Chatham
D. B. Edwards.....	Savannah, Chatham
J. L. Farmer.....	Savannah, Chatham

B. H. Gibson.....	Savannah, Chatham
H. W. Hesse.....	Savannah, Chatham
W. A. Norton.....	Savannah, Chatham
H. Y. Righton.....	Savannah, Chatham
Chas. Silverman.....	Savannah, Chatham
M. R. Thomas.....	Savannah, Chatham
R. M. Thomson.....	Savannah, Chatham
J. K. Train.....	Savannah, Chatham
J. T. Rogers.....	Savannah, Chatham
Everette Iseman.....	Savannah, Chatham
E. S. Osborne.....	Savannah, Chatham
C. H. Lang.....	Savannah, Chatham
H. Rubin.....	Savannah, Chatham
O. F. Keen.....	Macon, Bibb
L. C. McAfee.....	Macon, Bibb
W. M. Puckett.....	Montrose, Laurens
J. A. Garrett.....	Baconton, Mitchell
E. T. Newsom.....	Camilla, Mitchell
T. E. Oden.....	Blackshear, Ware
J. W. Oden.....	Blackshear, Ware
W. F. Revis.....	Homerville, Ware
G. N. MacDonell.....	Waycross, Ware
S. A. Alexander.....	Waycross, Ware
R. C. Walker.....	Waycross, Ware
J. F. Mixon.....	Valdosta, Lowndes
T. E. Pennington.....	Naylor, Lowndes
W. L. Bowers.....	Vada, Decatur
A. E. Crawford.....	Bainbridge, Decatur
A. E. B. Alford.....	Bainbridge, Decatur
W. D. Oliver.....	R.F.D., Brinson, Decatur
T. E. Blackshear.....	Dublin, Laurens
H. M. Birdsong.....	Ashland, Franklin
J. T. Arnold.....	Parrott, Terrell
Etheridge Hall.....	Adel, Berrien
F. M. Burkhalter.....	Ray's Mill, Berrien
R. G. Stone.....	Hawkinsville, Ocmulgee
W. H. Pirkle.....	Cochran, Ocmulgee
W. H. Turner.....	Roscoe, Coweta
P. J. Peniston.....	Newnan, Coweta
S. B. Little.....	Colbert, Madison
P. L. Hollingsworth.....	Meigs, Thomas
S. L. Cheshire.....	Thomasville, Thomas
B. F. Hamrick.....	Metecalf, Thomas
John Biggs.....	Pavo, Thomas
Fred Morris.....	Kirkwood, DeKalb
J. R. Anthony.....	Griffin, Spalding
J. H. Bullard.....	Matchen, Jasper
H. F. Bent.....	Midville, Burke
W. C. McCarver.....	Vidette, Burke
S. N. Martin.....	Graham, Altamaha
M. M. Head.....	Zebulon, Pike
J. R. Graves.....	Zebulon, Pike
R. A. Mallory.....	Concord, Pike
C. C. Griffith.....	Griffin, Pike
J. M. F. Barron.....	R.F.D., Milner, Pike
D. W. Pritchett.....	Barnesville, Pike
J. A. Corry.....	Barnesville, Pike

C. E. Suggs.....Barnesville, Pike
J. O. StricklandPembroke, Chatham
W. LapatSavannah, Chatham

An advertisement in The Journal of the Medical Association of Georgia will bring results. Rates sent on request.

Does your card appear in the Professional Directory?

MEDICAL ASSOCIATION OF GEORGIA

Sixty-Sixth Annual Session, Macon, Ga.,
April 21, 22, 23, 1915.

INFORMATION.

The headquarters of the Association will be at Hotel Dempsey. The general sessions, as well as meetings of the House of Delegates, will be held in the hotel.

MEMBERSHIP CARDS.

In order to facilitate registration it is urged that every member be prepared to show his membership card at the registration desk where badges will be provided.

PAPERS.

All papers on the program, whether read or not, will be published in the Journal of the Association.

ENTERTAINMENT.

The Bibb County Medical Society will tender a banquet to the members of the Association Thursday night.

MEETING OF COUNCIL.

There will be a meeting of the Councillors of the Association at Hotel Dempsey Tuesday evening, preceding the annual meeting.

PROGRAM.

Wednesday Morning, April 21.

Meeting of House of Delegates at 9 o'clock.

GENERAL SESSION.

Meeting called to order at 10:30 by President W. B. Hardman, M.D., Commerce.
Invocation.....Rev. E. C. Dargan,
Pastor First Baptist Church, Macon.

Address of Welcome.....
.....K. P. Moore, M.D., Macon
Response.....Thos. R. Wright, M.D., Augusta
Report of House of Delegates

Papers.

- 1. The Psychosis of Morphine and Alcohol. Was the Medical Profession Prepared for the Harrison Law?.....Cheston King, M.D., Atlanta
- 2. The Difference, as I See It, Between a "Doctor" and a "Practitioner of Medicine".....
.....R. P. Adams, M.D., Ashburn
- 3. Influence of School Life on the Physical Child
.....Theodore Toepel, M.D., Atlanta
- 4. The Need of Better Rural Sanitation.....L. C. Allen, M.D., Hioshton
- 5. The Doctor as First Aid in the Detection of Crime.....
.....C. W. Gould, M.D., Atlanta
- 6. The Duty of the Country Practitioner to the Drug Fiend.....
.....E. P. Bomar, M.D., Lyons

RECESS.

Wednesday Afternoon, 2:30.

- 7. Observations on Syphilitic Disease of the Nervous System.....
.....L. M. Gaines, M.D., Atlanta
- 8. Intravenous Injection of Bi-Chloride of Mercury in the Treatment of Syphilis
.....J. T. Stukes, M.D., Americus
- 9. The Diagnosis of Syphilis and Parasyphilis from the Standpoint of the Laboratory
.....A. H. Bunce, M.D., Atlanta
- 10. Syphilis of the Stomach.....
.....L. C. Fischer, M.D., Atlanta
- 11. Venarsen.....E. P. Merrit, M.D., and
C. C. Aven, M.D., Atlanta
- 12. Gonococemia
.....W. L. Champion, M.D., Atlanta
- 13. Report of Two Genito-Urinary Cases.....T. E. Blackshear, M.D., Macon
- 14. The Small Fibrous Prostate.....
.....A. L. Fowler, M.D., Atlanta

15. An Improved Method of Draining the Bladder after ProstatectomyE. G. Ballenger, M.D., and Omar Elder, M.D., Atlanta
16. Papilloma of the Bladder, with Report of Two Cases.....M. L. Boyd, M.D., Atlanta

RECESS.

Wednesday Evening, 8:30

17. Interpretation of Roentgenograms in Certain Gastro-Intestinal Conditions (with Lantern Slides).....Geo. M. Niles, M.D., Atlanta
18. Lantern Slide Demonstration.....E. G. Jones, M.D., Atlanta
19. Report of Tumor Formations of Unusual Interest (with Lantern Slides).....E. C. Davis, M.D., Atlanta
20. Spinal Anaesthesia in Surgery, with a Report of 927 Cases.....G. Y. Massenburg, M.D., Macon
21. Principles and Practice in the Treatment of Cancer.....M. B. Hutchins, M.D., Atlanta
22. Blood Vessel Surgery.....Hugh N. Page, M.D., Augusta
23. The Uncertainty of X-Ray Shadows of the Lungs in Tuberculosis.....Arch Elkin, M.D., Atlantt
24. Value of X-Ray in Diagnosis.....Jno. S. Derr, Atlanta

Thursday Morning, 9:00.

Report of House of Delegates.

25. The Country Doctor.....J. R. Robins, M.D., Siloam
26. Final Report of Work Leading to Eradication of Hookworm in Georgia.....A. G. Fort, M.D., Atlanta
27. The Commercialism of Pharmacy and the Reason.....A. D. Little, M.D., Thomasville
28. Tonsils and the Rheumatic Group....S. R. Roberts, M.D., Atlanta
29. Treatment of Bright's Disease with Cardiac InsufficiencyT. D. Coleman, M.D., Augusta

30. Some Phases of Nephroptosis in WomenW. F. Shallenberger, M.D., Atlanta
31. The Cerebro-Spinal Fluid.....W. R. Houston, M.D., Augusta
32. Pellagrous AcedosisH. F. Harris, M.D., Atlanta
33. Pellagra and the Central Nervous SystemHansell Crenshaw, M.D., Atlanta
34. Clinical Observation on Blood Pressure..J. H. Honan, M.D., Augusta
35. The Causes, Correction and Prevention of Abdominal Adhesions.....W. F. Westmoreland, M.D., Atlanta
36. The Necessity of a State Prosecutor to Enforce State Medical Laws....J. W. Palmer, M.D., Ailey

RECESS.

Thursday Afternoon, 2:30.

37. Exhibition of Fracture Cases.....C. C. Harrold, M.D., Macon
38. Concerning the Removal of Foreign Bodies from the Globe by the Electro-MagnetF. Phinizz Calhoun, M.D., Atlanta
39. Pulsating ExophthalmosT. E. Oertel, M.D., Augusta
40. Iris Injuries and Anomalies.....Ceil Stockard, M.D., Atlanta
41. Legislation for the Prevention of Ophthalmia NeonitoriumA. B. Mason, M.D., Waycross
42. Some Points in the Technique of the Submucous Resection of the Nasal SeptumNewton Craig, M.D., Atlanta
43. Injection of the Ganglion of Gasse Through the Foramen Ovale.....H. H. Martin, M.D., Savannah
44. Why Is Refraction of Eyes and the Prescribing of Lenses a Medical Problem.....Ross P. Cox, M.D., Rome
45. A Modification of the Sluder Method of Tonsil Enucleation.....W. Lapat, M.D., Savannah

46. Failure to Recognize Normal Variations in Abdominal Viscera, a Cause of Bad Results in Abdominal SurgeryBaxter Moore, M.D., Atlanta

47. Surgical Treatment of PoliomyelitisH. M. Michel, M.D., Augusta

Friday Morning, 9:00.

Report of House of Delegates.

48. Injection of Alcohol Into the Superior Laryngeal Nerve for Painful Tubercular Laryngitis.....E. C. Thrash, M.D., Atlanta

49. Intussuseption; Report of a Case....W. W. Battey, M.D., Augusta

50. Autogenous Bone Grafts in Non-Union and Malposition of Fractures of Long Bones.....W. S. Goldsmith, M.D., Atlanta

51. Tuffier's Ovarian Graft.....Walter Norton, M.D., Savannah

52. New Treatment of Burns, with Report of Cases.....H. R. Slack, M.D., LaGrange

53. Toxemias of Pregnancy.....G. A. Traylor, M.D., Augusta

54. The Relation of the Mammary Glands to Menstruation.....E. Bates Block, M.D., Atlanta

55. The Importance of Observation in DiagnosisE. E. Murphey, M.D., Augusta

56. Some Concluding Remarks on the Uses of Salicylate of Soda in the Treatment of Disease—A Continuation of Last Year's Paper....B. P. Oliveros, M.D., Savannah

57. Twilight SleepI. H. Adams, M.D., Macon

58. Suggestion for Arousing and Maintaining Interest in County Medical Societies.....W. C. Lyle, M.D., Augusta

President's Annual Address.

RECESS.

Friday Afternoon, 3:00.

Election of Officers.
Organization of Council.

PROGRAM FOR MEETING OF HOUSE OF DELEGATES.

**Wednesday Morning, 9 O'Clock,
Hotel Dempsey.**

Call to order by the President.
Enrollment of Delegates, by the Secretary.
Report of Committees.
Unfinished business.
New business.

Tuesday Evening 6 O'Clock.

Call to order by President.
Report of Special Committees.
Report of Council.
Unfinished business.

BOOK REVIEWS.

Diseases of the Stomach, Intestines and Pancreas.

Diseases of the Stomach, Intestines and Pancreas. By Robert Coleman Kemp, M.D., Professor of Gastro-intestinal Diseases, New York School of Clinical Medicine. Second Edition, Revised and Enlarged. Octavo of 1,021 pages, with 388 illustrations. Philadelphia and London. W. B. Saunders Company, 1912. Cloth, \$6.50 net; half morocco, \$8.00 net.

This comprehensive work, well illustrated, has proven to be a useful manual to the student and practitioner. The present edition contains, in addition to the material in the first edition, which has been rewritten, chapters on Colon Bacillus Infection and on Diseases of the Pancreas. It is difficult to include all that a reader may desire in a book of this size, and it may be questioned whether the addition of the chapter on diseases of the pancreas is well placed in this treatise. One also looks for a discussion of typhoid fever in books on medicine or on treatises on that special subject, rather than in a book of this kind. The chapters on methods of examination are very complete and the whole book should prove very useful to the specialist and to the general practitioner as well.

Jelliffe (Dejerine and Gauckler) The Psychoneuroses and Their Treatment by Psychotherapy.

The Psychoneuroses and Their Treatment by Psychotherapy. By Prof. J. Dejerine and Dr. E. Gauckler. Authorized translation by Smith Ely Jelliffe, M.D., Ph.D., Adjunct Professor of Diseases

of the Mind and Nervous System, Post Graduate Medical School and Hospital; Visiting Neurologist, City Hospital, New York. Philadelphia and London, J. B. Lippincott Company, 1913. Cloth, \$4.00.

The translation of this very useful and practical work on a subject of great interest to the profession places a good book on the subject within reach of English readers. The work deals with the symptoms of the psychoneuroses in an analytical way, giving the psychologic basis of the practical study and treatment of this class of mental diseases. The most useful part of the book is that which deals in a fairly complete manner with the methods employed in treatment. The authors emphasize the factor of the moral aspects of treatment.

Ten Sex Talks to Boys.

Ten Sex Talks to Boys. By Irving David Steinhardt, M.D. 5x7 1/2 inches, 187 pages. J. B. Lippincott Co., 1914. With an introduction by Ernest Thompson Seton.

This book may be used by parents or teachers as a basis of instruction, or placed directly in the hands of boys as soon as they read well. In either case the need is well met, and this text should be most helpful in the solution of a problem called by President Elliott the greatest society must face, where our prevailing policy of attempted concealment and ignorance has been a costly failure. The facts are presented in a plain but not offensive way, with emphasis upon the dangers of infectious diseases and a demand for a single standard of morality.

Dercum—A Clinical Manual of Mental Diseases.

A Clinical Manual of Mental Diseases. By Francis X. Dercum, M.D., Ph.D., Professor of Nervous and Mental Diseases, Jefferson Medical College, Philadelphia. Octavo of 425 pages. Philadelphia and London, W. B. Saunders Company, 1913. Cloth, \$3.00 net.

This book, as the title indicates, is a manual for students and practitioners of medicine. Part I deals with the forms of mental disease; Part II treats of mental diseases as related to somatic affections and other factors. Part III deals with the psychological relations and interpretation of symptoms. Part IV includes treatment. The first parts of the book present a clearly written and concise statement of the facts of mental disease. The chapters on psychology and treatment are sensible and practical. The book on the whole is well suited to its purpose.

Gardner and Simonds—Practical Sanitation.

Practical Sanitation. A Handbook for Health Officers and Practitioners of Medicine. By Fletcher Gardner and James Persons Simonds. St. Louis, C. V. Mosby Company, 1914. Cloth, \$4.00.

This excellent book of 403 pages deals with the subjects of Epidemiology, General Sanitation, and Laboratory Methods, and should be found useful to the health officer and student of sanitation. The attempt to include in a single moderate priced volume a discussion of so many topics has made brevity a necessity, with the result that some of the chapters are incomplete. On the whole, however, the book will be found useful along the lines indicated by the authors, who are men of experience in the matters they discuss. It is doubtful whether the book "fills a vacancy in literature," as stated in the preface. The chapter on laboratory methods is too brief to be of much value.

Richardson--Harrington—Practical Hygiene for Students, Physicians and Health Officers.

A Manual of Practical Hygiene for Students, Physicians, and Health Officers. By Charles Harrington, M.D., late Professor of Hygiene in the Medical Department of Harvard University. Fifth Edition, Revised and Enlarged, by Mark Wyman Richardson, M.D., Secretary to the State Board of Health of Massachusetts. Lea and Febiger, Philadelphia and New York, 1914.

This well known manual has been revised and enlarged, and is issued in a volume of 933 pages. The treatment is concise but comprehensive. It is inevitable that some subjects, such as school inspection, may seem to some to have too brief a treatment. The chapters on food seem to be quite complete. The book is well indexed. While the student must refer to special works for more complete treatment of many subjects, it is safe to state that this work, in its new edition, will continue to hold a place in the library of the health department.

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